

INTERSTATE MEDICAL JOURNAL.

Vol. XVI.

DECEMBER, 1909.

No. 12.

EDITORIAL.

A MEDICAL VIEW OF OUR MANY IMMORALITIES.

The charge that the science of medicine is holding itself aloof from the controversial questions of the day, need no longer be considered in the light of truth; for with an enthusiasm not unworthy of adolescence—that period in one's existence when all sorts of problems seem so easy of solution—the medical mind is displaying a doughtiness hitherto associated only with the martial spirit. It would seem that having been criticized for so long on account of a lackadaisical attitude, its one desire now is to achieve, in the shortest space of time, the distinction of frenetic activity. No critic of our present medical tendencies can think aught but that our interest in things, in the borderland which separates what is strictly medical from what is strictly sociological, is a lively one, and is metamorphosing medical science itself, from a dry-as-dust study, barricaded from the outer world, into an open page to be read with comparative ease. Encouraged by the thought that success has attended all efforts at amelioration of nuisances in the limited field that the borderland represents, and brave in the feeling that publicity—that bugbear of our medical ancestors—has not really deprived the science of medicine of the respect which it has always been desirous of conserving, the medical mind is reaching out for new fields, wherein to plant those ideas which shall fructify for the benefit of the people at large. And that its ambitions are a thing to be reckoned with every magazine attests almost monthly, for the columns, which hitherto were devoted to the exploitation of the inanities of the emasculated hero and the simpering heroine, as conceived by the popular American novelist whose one idea is not to offend, have been usurped, to a great extent, by medical considerations written quite in the medical manner. But the thought, which must assail us upon reviewing what has been said on medicine in the twelvemonth about to close, is that the list of subjects which can be discussed in our literary journals must ere long come to an end; and so suddenly, that the many readers,

who have laved in the bewildering technicalities, and strengthened—or shall we write weakened?—their quota of mentality by means of theories which have cried aloud to be read, will be in sore perplexity. To avert so great a disaster would it not be well for those seasoned writers who have devoted time, patience and considerable talent to the writing of the popular medical article, to ascertain by extensive study, in what respect and how far the science of medicine may be a factor in minimizing all those immoralities which always seem to be the undesirable concomitants of the highest civilization. In other and less complicated words, why should not this special science achieve the distinction of an influence in other walks besides the etiology and treatment of disease?

When we look about and take note of the enormous seriousness of the tyros in the limitless province in which reforms as to our morals spring up with mushroom-like rapidity, we, as exponents of the medical art, are prone at once to interfere; for, being ground in the principles of disease, not only of the body but of the mind, we are loth to be silent. Our desire in the service of candor is the impelling force; but, then, should candor have full sway? should it destroy ideals at once, and bring an agitated movement that is upheld by pillars none too strong but fashioned so cleverly that one cannot help but admire them, down to the drab monotony of every-day reality? The stern rules of medicine would make short shrift of the matter, and though much might be said in praise of truth when it is dressed in the garb that admits only of one interpretation, the cry of the little people—reference is here made to the minds which are mosaics of narrowness, obliquities, and Philistinism, but are the most active when the subject is that of reform—would not be stilled until terms were used, that would but hazily convey to others what was really meant by the scathing and uncompromising medical attitude. Hence, the idea occurring to him who is a mere looker-on of this inconsequential and somewhat farcical play, would partake of the color that all ideas have when they are nurtured by the outcome of the warring factions of truth and prejudice! In sum, his bemuddled brain would see through a glass darkly only the terrors as pictured by the perfervid lay reformer, and the uninviting baldness of truth, unrelieved by any warmth that might be added when the medical man warns in a spirit of philosophic kindness. It would be a gaunt picture with all that is repellant; and in so far as the finer shades would be lost—the blending of those tints that make for enough of the humanities to show us that, though our material is poor, there are possibilities of improvement through the right sort of education—it would be purposeless in driving home the lesson.

The question to be asked here is, What are our immoralities? We pause long enough to ask this because of the difference of opinion on

this vital subject. Perhaps two people may agree as to their number and heinousness; but this advance would be of little help in quelling the jarring notes when some hundred voices are strenuously asserting their own carefully nurtured opinions as to what constitutes this broad subject. Education, or lack of the right sort,—and who will decide which is the right sort?—an early training that partakes only of the harshnesses of life with no idea of its warmth, a disciplinary up-bringing that makes for prejudice of what is outside the narrow domestic circle, crushing reprimands of quite innocent acts that result in cant and hypocrisy, or when the youthful product advances in years, in open revolt, may do much to color an attitude that, in the matter of judging the importance or unimportance of moral derelictions, should have all the broadness of a sanity imbued with clear and just conceptions. In demanding a calm and comprehensive survey, we may be overestimating the mental and moral forces of any one individual; but should not the composite picture of what we easy-going critics are pleased to call “the best elements in a community” present enough of the right material whereon to build the hope, that before long there will be a weeding out of unnecessary and nerve-racking talk about our lesser moral disabilities, and only a clear-cut insistence of what is elemental?

Within the short space of the year about to close, the medical, as well as the lay, world has been more or less burdened by controversial upheavals on the deterioration of our literature, the grossness of the drama, the scandals of our divorce courts, and other edifying subjects. One might ask, of what moment are these contentions to the medical mind? While, directly, their bearing is not so great that we need pause in our work to contemplate the social cataclysm as described by the perfervid critics, indirectly they have this interest that if these defects are only in part as widespread as unwonted enthusiasm makes them out to be, the preservation of our race is seriously compromised. And every physician, who is imbued with the dicta of preventive medicine, knows that even though to-day preventive medicine appears to the lay mind to embrace only the measures which should be instituted to curb disease-manifestations, the subject is much more comprehensive, since it is not indifferent to what cannot but be the basis of health—a cleanly moral and physical record. To achieve this end a knowledge of disease is essential, and since it is not to be expected that the laity should know the full meaning of this movement, it must devolve upon the physician to be the mentor. How he is to go about spreading the knowledge which too long has been hidden, is another story, as Kipling would say, and must be decided by the medical body so as to avoid controversy in its own ranks. But if its teachings shall bear fruit among the people, two important matters should

not be lost sight of—the ineptness of too much seriousness, and the weariness in the minds of the uninitiated from the overlaying of technicalities.

The thought which prompts a number of medical men to ally themselves with members of the laity, when about to launch the various societies which have for their watchword the reform of social and moral matters, in the hope that by so doing the medical aspect of all these questions will be appreciated to their fullest extent, should now be considered a mistaken one; for the “brutal candor” of the medical man’s talk, especially in those societies which are concerned with questions pertaining to the sexual life of man and the diseases invariably tabooed by a foolishly encouraged Puritanism, has invited nothing but the most adverse criticism. That this criticism has emanated from lay members who have stood for an intelligent grasp of the subject is indicative enough of their trend of thought when applied to candor, and must move the medical philosopher to the very natural cogitation, that if those who are supposed to be the elect among the laity are thus guilty of an artificial refinement, what must not be the horror of the dyed-in-the-wool Philistines, whose definition of life has always been the greatest stumbling block to progress. And that this complication, this clog in the wheels which are thought, by their illuminating rotation, to be able to dissipate the shadows which now engulf the sexual question, will continue in the circumstances which now obtain—the misalliance of medical men with enlightened laics—is no crotchet on the part of the writer of these lines, but a fact so often evidenced, that despite the repeated coming together of these constituents to formulate one clear idea, confusion, as to what was really expounded by the medical man, is about the only result. Hence the impossibility of any one outside the scientific barriers of medicine to see and judge the sexual question from the only standpoint that would make for a complete understanding.

If, as we have suggested above, it should ever happen that our medical reformers of morals desire to ventilate their opinions in the magazines which are now only too eager to print popular medical articles, let them remember the experiences of those who have either been members of special societies, or have followed their proceedings; for if they do not, their contributions, if too broad from a conventional standpoint, will be visited with the sort of snubbing that all people bestow on those who ruthlessly rend the supposedly Sacred Veil. On the other hand, if the technicalities swamp the thought that should be read with ease, or the glozing is so thick that only a pretty romance is evolved, the medical hand will lose of strength, and far from accomplishing a good and honest purpose, will be but the member of a weakling who writes for the further confusion of a matter that is built on the simplest lines.

A ROYAL OCULIST.

The democratic idea, uppermost in the breasts of all patriotic Americans, is that we are about the only people on earth who can forget that we are well-born, when necessity demands our forsaking a luxurious life for reasons which compel our making a livelihood. We fulsomely talk of this as if it were peculiar to the very air of the country, and cite case after case in many a conversation that would be "thin" without this iterated self-praise. Now, though it might be contended that the very modern disease, known to psychiatrists as "descent-psychosis," is not as widespread here as abroad, there are enough indications already with us—thanks to our imitative qualities—that the day is not far distant when a large number of our fellowmen will be bitten with it. The medical ranks in this country have up to now been singularly free from the affection, but prophecy is naught even in so democratic a province as the republic of medicine, for are we not part and parcel of the general social life, and are not our foibles open to temptations which might factitiously enhance the worth of our positions, in the eyes of all those strugglers who have but one foot on the medical ladder? Nevertheless, as things now stand in the medical profession, we are not too greatly overburdened with those, who by their addle-pated talk in regard to the merchant prince, or the inevitable Captain or General, "who was our family's most distinguished ancestor"—authors and artists are too low to be mentioned—that we need fear the dissemination of ideas which might upset the small-brained in our ranks, or change the honorable and plodding physician, into an inflated being whose strut proclaims his vacuity. And with the thought of how foolish it would be were we to encourage the acquiring of a "descent-psychosis" in our medical ranks, we turn with relief to the contemplation of one who, though born in the purple, never betrayed, during his long career as a physician, the slightest indication that the matter of birth ever stood between him and his duties toward those among his patients, who came to him as much for his skill as on account of the fact that they knew of his many charities. We are speaking of the recently deceased oculist, Duke Karl Theodor of Bavaria, who, though inconvenienced by all the traditions pertaining to the iron-clad rules of court life, rose above them in true untrammelled democratic fashion, and freed himself so thoroughly from the thongs that bind too closely, that he was not long in merging his royal proclivities and prejudices into the broader life of humanitarian and physician. And, in this instance, let us add, there was no thought of "descent-psychosis."

Bayreuth in Bavaria is not unknown to the traveled and untraveled American, for not only was it the home of Richard Wagner for many

years, but to-day it is the musical Mecca of all those enthusiasts who, while they may not understand the "science" of the Master's operas, are clever enough not to betray their limitations. Now a semblance of genuine interest should not be deprecated too harshly, for it may arouse in the less emotional a deeper interest than is their wont, and thus be the means of increasing the number of admirers; and though this obtains quite often enough to insure a small army of adulators, we are, nevertheless, of the opinion that unless the feeling is genuine—that is, born of a complete understanding of the subject—the gain either for admired or admirer is small. This sort of spectacle is repeated so often that, at times, when we are in a philosophic mood, we despair of our faith in human nature, and feel that what is most abstruse, what is completely divorced from simplicity, is always the object of extravagant praise.

But as regards the other great man of Bayreuth, the late Duke Karl Theodor, the very simplicity of his life would do much to repel those whose minds are steeped in the intellectual entanglements of the gropings of a master-mind. We doubt, therefore, if any of the many tourists who made the long journey from this country to Bayreuth, for the sake of hearing Wagner's operas sung as he intended them to be, ever so much as inquired about the famous oculist and the private hospitals he maintained; or ascertained how important he was to the health and welfare of the town. These were unimportant matters to them, but not so to those who made their homes in Bayreuth; for though the musical genius of Wagner is still considered a force of undeniable worth, the simple citizen who slowed his gait to keep pace with the peasant or huckster, in the hope of knowing him better and studying his various moods and desires, was the real power in the town. For out of his bounty the necessitous were fed, and by reason of his skill the sick were made his everlasting debtors.

CIVIL SERVICE IN STATE CHARITABLE INSTITUTIONS.

The merit system in the selection of employees for all the departments in the Federal Service, is already being recognized as the only natural and successful means of securing applicants who are the most efficient; while, on the other hand, appointment to positions in the service of the General Government of persons whose claim is based only on political, or better expressed, on partisan activity, is no longer admitted as being tenable. So widespread are the advantages accruing from the merit system, that the principle involved is accepted without question, even

among those practical politicians, whose emoluments though circumscribed by its application, yet dare not any longer defend the spoils system openly, despite the fact that they foster it, wherever possible, by obstructing in secret the complete operation of civil service rules.

Although admitted to-day to be a practical working plan as applied to the larger interests of the nation, the merit system, be it said with emphasis, is not gaining ground as readily, in regard to State and municipal appointments, as its staunch advocates would desire.

In a paper read by Dr. M. A. Bliss before the State Conference of Charities and Corrections on November 5, at Farmington, Mo., attention was directed to the number of states and municipalities which have adopted the merit system in the selection of public servants. From Trenton, N. J., to Portland, Ore., from Colorado to Massachusetts, the plan is appealing to the business and moral sense of the people with enough force to encourage a trial of its merits; and what is the best evidence is shown by the records which indicate that nowhere has a return to the old method been seriously advocated, once a well-intentioned trial was made.

There is no function of the State which is more altruistic and demands more careful selection of agents of administration than that of caring for the sick poor. With what care do those who can afford to pay, select physicians, nurses and attendants, so as to direct the treatment, to administer to the comfort and to guard the safety of their sick ones. Whether mentally or bodily sick, these requirements are considered of equal importance. But in the case of the sick poor, though they are the wards of the State, and by reason of this should receive the best attention, such care has not been shown.

At present physicians, assistants, nurses, attendants and other helpers are, in Missouri, selected without the application of any test to established fitness for the duties of the positions they are to fill. Again, after they have, in many instances, gained experience in the special lines of work by divers periods of application, they are swept out to make room for another batch of the inexperienced. Were these changes made in the interest of the sick, the error which is now committed, irrespective of efficiency on the part of an attendant, would be greatly palliated; but they are invariably made because, in the fitful changes of political fortune, the opposite party has gained ascendancy.

Whatever it may lack of reaching perfection, competitive examination is admittedly the best present plan of acquiring the most competent and excluding the most unfit appointees. It closes the door of admission to many whose aspirations are ahead of their abilities. It protects the appointing body from exasperating solicitation and even threatening de-

mand. And best of all considerations, it subjects the employee to the best devisable test of fitness, short of actual trial, in the position sought.

Civil Service rules, honestly and earnestly applied, result in a retention and advancement of the best elements in the corps, and in the elimination of those whose actual performance does not measure up to the standard established by the best. Moreover, the merit system saves to the service of the State, the energy now applied to each election by the holders of appointments, for the preservation of their party in power. Their tenure under the present system depends upon their vote-getting abilities. As for its being a matter of principle, that is a contention that is easily riddled; for without doubt, the activity created among partisan workers is entirely due to the acquiring of dollars and cents,—in short, a livelihood gained under the easiest conditions.

But, on the other hand, much may be said on behalf of the merit system. It is informed with many virtues of which fitness for admission to the service is the first desideratum. Efficiency would be the only pathway to promotion, and tenure of office would be protected so well that removal would be difficult, unless there was a dereliction in the matter of duty. In the management of the State hospitals, the important item of economy under the merit system in connection with a merciful attitude, should not be overlooked. In sum, there would be more and better service for less money, a fact that has been the rule wherever the system has been tried.

And with these lessons before her, why should the State of Missouri be a laggard in the matter of adopting the merit system in her eleemosynary institutions? Are her sensibilities so blunted, is her acumen so defective, that she is purblind to the many successful working examples in other States, which, with but little effort on her part, could be used as a pattern for the making of her own statute, with improvements or modifications to meet her own special needs? The Civic League of St. Louis has already prepared a report, embracing a suggestion to the Board of Freeholders, of the form an ordinance should take which has for its object the establishing of the merit system; and with so excellent a suggestion at her very door, Missouri would invite nothing but dispraise were she to continue to express indifference to the advantages arising from a well-trained and stable personnel in her hospitals, secured by competitive examination or investigation, the classification of employees, and promotion on the basis of the best service.

THE BUREAU OF PUBLIC HEALTH.

In the President's message which has just appeared the salient feature, for physicians throughout the country, is the suggestion for the establishment of a "Bureau of Public Health." What such a bureau would mean in the matter of the study of diseases which affect the health of many thousands of citizens, cannot be overestimated, for by its Federal control it would be far-reaching enough to grasp situations which now are beyond the Government's jurisdiction. The concentration, resulting from a central governmental office presided over by scientific investigators, would undoubtedly be the means of effecting investigation directly a report reaches the bureau, and thus a whip would be placed in the Government's hands to lash the first manifestations of a disease. Again, what could be better for the preservation of the health of the country, than a vigilance that would note all those variations in statistics that now escape Federal notice, on account of the lack of the proper facilities. And since preventive medicine is the order of the day, would not the bureau be a splendid asset in warning and admonishing those communities which, on account of carelessness, are only too often guilty of a laxity that is a menace to the health of their citizens.

The two diseases—hookworm and pellagra—are cases in point, for our present knowledge of them, due to latency, illustrates the importance of not repeating an oversight, until the spread of a disease is so wide that it is difficult to combat. But in case the "Bureau of Public Health" is established this *contretemps*, so indicative of a Bureau's need, will be nigh impossible; for being in touch with all the sections of the country, it will see that directly reports are sent in, its investigators will be put to work to remedy, if not completely stop, all untoward situations.

No country of the intelligence of the United States can afford any longer to be without a "Bureau of Public Health," and though the President's remarks are only a suggestion to Congress, we feel that their weight will not be lost on a body of men who surely must have the health interests of communities at heart, in the same proportion as they have the political interests.

LITERARY NOTES.

By the death of Richard Watson Gilder the ranks of literary men, that have for cause the prosecution of the best literary spirit, as illustrated in weekly or monthly publications, have been considerably weakened. The *Century* would not be the force it is to-day had the reins of its leadership

been held by weaker hands than Gilder's; and inasmuch as he raised, by the best sort of journalism, a rather obscure monthly—obscure by comparison with its foreign competitors—to exalted heights that need fear no adverse criticism, our judgment of everything else that he attempted in the literary line should be tempered by the kindest spirit. In no other magazine that we know of has the reflected personality of an editor been more evidenced; and though we might write that a dominating force is not always for the best of a magazine, in the case of the management of the *Century*, that sort of charge would be without foundation. For Richard Watson Gilder was just and upright; his manliness always went unquestioned; no literary obliquities ever bemuddled his brain; and backed as his judgments always were by a deep and varied knowledge of the literary tendencies of the day, his mistakes, in the conduct of a great magazine, could be naught but infinitesimal. The lesson to be got from the life which has just closed is one that should be remembered by all editors throughout the country; and even though the man at the helm may have but a second-rate bark to guide through the treacherous waters of modern journalism, his thought for good derived from the life of Richard Watson Gilder, so as to abet his less ignoble qualities, will bear as much fruit as might fall to him whose responsibilities are larger.

Dr. de Keating-Hart's "La fulguration et ses résultats dans le traitement du cancer," recently published by A. Maloine of Paris, contains the results, up to the present, following the employment of the method of fulguration by the author himself, and by those who have practiced its technique; and he marshals the statistics pertaining to 247 cases treated by himself against the failures, as published from time to time, by a certain coterie of surgeons. The author divides his own statistics, covering 247 cases, into two categories, the first comprising 83 cases of general cancer, to-wit:—those in which cancer developed in the vital organs. Of these there were 72 per cent. in which the amelioration was decided and unmistakable (suppression of hemorrhage and of pain, cicatrization, improvement in the general health, etc.). In the second category are grouped 118 cases in which the macroscopic lesions were removed before fulguration was instituted, and 13 cases operated upon according to the present principles of surgery. The 118 cases yielded 66 per cent. of cures, the time ranging all the way from six months to three and a half years, while the 13 cases, of which 5 were cancer of the tongue, were without relapse during the limited time of from six months to a year. In connection with these facts the author strengthens his attitude, in the matter of fulguration, by the encouraging statistics of Duret and Desplat; concludes by explaining the failures of other experimenters on account of errors in technique, be they electrical or surgical, and points out in what direction these errors most often lie.

ORIGINAL ARTICLES.

THE CURE OF MOVABLE KIDNEY BY RESTORING THE STANDARD WEIGHT WITH A PURE MILK DIET.*

By LOUIS KOLIPINSKI, M. D., of Washington, D. C.

Sed ego diæta curari incipio, chirurgiæ tædet.—CICERO.

A movable kidney is one that, when the subject stands or lies upon the opposite side, falls forward into the anterior part of the abdomen, into the lumbar, the umbilical or even into the hypogastric region, and recedes when the position is supine or upon the defective side. The term moving kidney would seem more precise than that in common use. A floating kidney is one of congenital origin, has a complete peritoneal envelope, is liable to pathologic change, must be distinguished from the former, and may require other, namely operative, treatment.

A movable kidney is an abnormality of adult life, is rare in men and very common in women, more in those who have borne children, but by no means seldom in nulliparous females, and in the majority of cases is found coexisting an hysterical or neurasthenic or melancholic state.

The prime cause of this displacement is emaciation. Leanness is almost always present. In a manual examination of a thin woman a movable kidney is very frequently discovered, much oftener indeed is it present than it is felt for. Furthermore it is not difficult to palpate the kidneys in a suitable subject and a firm pressure into the costo-iliac space posteriorly may produce primarily the condition of a renal dislocation.

The normal kidney is embedded in an abundant mass of fat and connective tissue which fills completely the dead space around the organ. In wasting of the body this fat disappears rapidly so that in very thin persons none at all remains. For the occurrence of movable kidney then, various conditions are associated or liable to make it appear much more frequently in women than in men. The lesser muscular development of the female and the greater laxity of the articular system. The distension of the abdomen in gestation and the post partum looseness of the abdominal wall. The greater proneness of women to lose weight than men. The less resistance to mild trauma and the greater strain of muscular effort of all kind, result in women in a moderate impulse being sufficient to dislodge a kidney robbed of its essential support. This is why the right

*Read at the Meeting of the Therapeutic Society of Washington, D. C., November 6th, 1909.

side much oftener presents it than the left, the stress of muscular effort in the right handed individual. That tight lacing and unsuitable corset, and high heeled shoes can produce this abnormality may be possible but are of trivial importance since those liable will acquire this condition be these factors present or absent.

A movable kidney is discovered by manual palpation in the following manner: The subject is placed in the side position, the knees slightly flexed, the trunk slightly prone, a firm pillow is placed beneath, if the bed is too yielding to elevate a little the surface to be examined. The costo-iliac space is pressed inward with the hand, when it will be found to be less resisting than normal. Percussion of this area and over the twelfth and eleventh ribs gives a sound more or less tympanitic. More marked in left renal displacement than in right but sufficiently



Fig. 1. Multipara, aet. 63. Right movable kidney below umbilicus.

distinct in the latter to make this a good confirmatory sign of an empty or occupied cavity within. The other hand feels the anterior abdomen and a movable kidney is usually discovered at the outer border of the rectus muscle, at the level of the umbilicus, occasionally a little higher than this or else below the same land mark. If the abdominal wall is thin and lax the dislocated kidney can be grasped with the finger tips or held between the apposed hands. To do this the observer is in front of the subject and in the same position the abnormal organ can, not alone be most distinctly felt in outline, but, also, when supported by the palpating fingers, be seen.

A movable kidney may be existant for years and cause no complaint

or disturbance in health or else the symptoms it produces are so clearly stated by the patient that the observer is directly guided to verify his assumption. The most common subjective symptom is the feeling of its presence produced by the fallen kidney in its adventitious place and with this an abdominal pain over the affected organ on standing, or in walking. It is not tender unless pathologically altered or a firmer pressure is applied. Firm bimanual pressure may cause immediate nausea. Dyspeptic disturbances may occur but are not acutely marked. They are flatulence, epigastric oppression, with cardiac palpitation, attacks of vomiting, sense of uneasiness after eating, or more or less cardialgia.

True migraine may be caused by movable kidney.



Fig. 2. Multipara, aet. 63. Right movable kidney in natural place.

A new group of symptoms arise, of a psychic kind, in many patients on being informed of the name of their infirmity. Many of neuropathic tendency, aggravated by emaciation, cannot bear the burden of the knowledge that they possess a dislocated, a movable, even a floating kidney. This thought is fear and awe inspiring. A gentle intimation that an operation is or very soon will be necessary throws them into a panic of terror or the apathy of indifference. Agents like these result in the development of severe hysteria, neurasthenia or melancholia.

Acute hydronephrosis may occur in movable and in floating kidney, from torsion of the ureter and that similar acute paroxysm with severe pain, vomiting and appearances of shock or collapse called Dietl's crisis and thought to be due to torsion of the renal vein.

The indication in the treatment of movable kidney is to restore the

organ to its proper site and to retain its there by means of its natural support, in fact to replace the wasted fat capsule.

This can be done with most expedition and ease through the use of a pure milk diet, so estimated as to approximate a gain of one and a half to two pounds in weight each week. A pure milk diet pursued with system accomplishes this with great exactness and without any other remedial adjuvants excepting those cases where the nature of her affliction has demoralized the patient and we seek to rid her of her apprehensions in the shortest time and to control her habits so that she may not wander from the exact regimen. A rest in bed, a bed cure of four to six weeks is then the only other aid used in the milk treatment.

In determining the quantity of milk required and the patient's power



Fig. 3. Multipara, aet. 29. Right movable kidney at level of umbilicus.

of consumption; it is necessary to find the standard weight determined by sex, height and age. This is done with the aid of tables such as those compiled by Dr. A. S. Rogers.

The daily measure needed is from eight to sixteen pints. The necessity of these fixed quantities is established by the weekly gain in weight determined by the scales.

It may be proper to state that these views of dietetic milk therapy are based solely on experience in practice. Milk used in large volumes is a harmless food of unequalled power and virtue, so perfect that the economy needs not even drinking water and in its raw state daily ingested in any amount will not be found to be a medium for the transmission of the germs of contagious disease.

The milk should be taken at two hour intervals, beginning early and continuing as late at night as may be necessary to consume the quantity fixed upon.

The effects of the milk diet on the organism of the patient whose weight is to be increased are the following: The blood volume is raised to normal, if deficient, and likewise the composition and quality. It is a direct food and restorer to the heart muscle and increases the normal secretions and excretions. It augments the biliary flow, greatly increases that of the urine and, regulating the evacuant function of the bowel, cures constipation.

It makes one animated and cheerful, increases weight very much when subnormal, strengthens the muscles and tegumentary system. It causes



Fig. 4. Multipara, aet. 29. Right movable kidney in natural place.

profound and refreshing sleep. It rouses appetite to a stage of hunger but abrogates entirely the sense of thirst.

The following notes of some cases of movable kidney cured with a milk diet explain the method in practice and show with what ease and accuracy it is possible to restore the deficient weight to the body by the rapid and normal deposition of fat.

CASE I. Married lady, mother of two children; age 30 years; height 5 feet 4 inches; standard weight 129 pounds.

Had a movable right kidney for five years, discovered soon after the birth of her second child. At that time nephrorraphy was urged by a surgeon, but deferring to the wishes of her family, who feared for her safety in view of her weak and debilitated state, operation was de-

clined. She became an exquisite example of invalidism from this cause. Standing and walking were associated with abdominal pain, dull dragging or acute. The dislodged organ could be plainly felt and seen, at times in different parts of the abdomen, right and left, being a veritable wandering kidney. Her appetite was poor, spirits depressed, more or less taciturn. She had frequent and severe attacks of migraine confining her to bed and at times treated with the hypodermic use of morphine.

In one of her attacks of sick headache whilst away from home, the moving kidney was discovered by her medical attendant and she was deliberately advised that an operation was urgent as the state of the affected gland appeared to show the beginning of a graver lesion. Still more depressed in spirits and alarmed at the danger to herself she submitted to the milk treatment with excellent zeal. It was combined with confinement to bed for more than a month. The kidney when, last seen in its aberrant position at the beginning of the treatment, lay to the right of the navel and elevated the skin in a convex ridge. The initial weight was ninety-two pounds. She began to take five, six and soon seven quarts of milk daily. At the end of five weeks her weight was one hundred and ten pounds. In the eighth week, being up and lightly dressed, the weight had risen to one hundred and twenty-two pounds. At the end of the fifteenth week the patient had attained one hundred and thirty-five pounds and could be considered physically perfect. Interviewed a year later this lady's state had remained as it was at the end of the treatment. She had not had a single abnormal sensation from her former infirmity or a single attack of migraine. Her manner was joyous, grateful and appreciative.

CASE II. Female of sixty-three and mother of several children; height 5 feet 4 inches; standard weight at forty years 135 pounds.

Was extremely emaciated mainly from fasting as she was tormented with distress after eating, gastric pain and so on. The incessant complaints of her morbid feelings had confused her family and a series of medical attendants. Four different times was the right kidney found movable and dislodged and the same number of advisers recommended operation. She possessed several different bandages, none of which she was able to wear without further discomfort and distress. The woman was agitated with melancholia but it was impossible to determine which was the primary abnormality in her health. Whilst suffering abdominal pain all the time this was referred to the left inguinal and left lumbar regions, she declaring the movable kidney gave her no inconvenience. She was given seven and soon eight pints of milk daily. The initial weight was ninety pounds about the end of May, 1909; June 6 the weight was 93½ pounds; June 14, 97 pounds; June 20, 98½ pounds; July 3, 101 pounds; July 21, 103 pounds. Gain had been held back by an attack of summer diarrhoea. August 3, 108 pounds; August 24, 114 pounds. The illustrations show the kidney fairly visible in the first figure and in the second it is in its normal place in the loin and the an-

terior abdomen is shown with an empty concavity where it had formerly been found.

CASE III. Female, single, age 29 years; height 5 feet 2 inches; standard weight 121 pounds.

Had a right movable kidney for years. Was employed as a maid in an establishment for the manufacture and selling of bandages and corsets for her identical affliction. She was much emaciated and her employment and the necessity of ascending staircases were too arduous and painful so that she gave up her work in despair. She had much backache and pain in abdomen, so much in walking that she held, as she said, her stomach with her hands. She had, furthermore, a burning sensation of the skin over the painful region and she could feel the lump when in or out. When in an ordinary corset, was comfortable; when out a sickening pain resulted therefrom. She could reduce the kidney when out of place by lying upon her back, flexing acutely the knees and inspiring deeply. On relinquishing employment she went home an invalid in strength and bodily comfort. She became liable to attacks of fainting, later of hysteria; she grew morose and wanted to die. Domestic poverty aggravated her ill health.

She was given 4 to 5 quarts of milk each day. Here follows the record of the weights:

July 15, 1909....	100	pounds.
July 21, 1909....	101	pounds.
July 26, 1909....	103	pounds.
Aug. 1, 1909....	104½	pounds.
Aug. 11, 1909....	106	pounds.
Aug. 16, 1909....	107	pounds.
Aug. 21, 1909....	110½	pounds.
Aug. 28, 1909....	113½	pounds.
Sept. 4, 1909....	114	pounds.
Sept. 20, 1909....	117	pounds.
Oct. 2, 1909....	118	pounds.
Oct. 9, 1909....	121½	pounds.

The illustrations show the appearances of the abdomen at the beginning and at the end of treatment.

It will be found that this dietetic treatment will cure most cases of movable kidney when emaciation is present. It must hence be applied before any other method of cure or treatment is entertained. The operation of nephrorraphy may be done in the obese, in degenerative floating kidney, and the same with hydronephrosis and when the milk diet has restored the weight but not the kidney to normal.

Of the other non-operative means of treatment, nothing favorable can be said, as they are either crude and inefficient or else with no rational basis or theory. The wearing of belt, corset or truss is totally inappro-

priate and there is no similarity between the subject here considered and an ordinary hernia. From book to book, approval of such appliances is copied whilst it is apparent that the authors are totally wanting in practical experience of any benefit done therewith. Massage is another example of a vague and imaginative treatment. Such means neither ex-nor relieve. Electricity should likewise be damned without praise and finally extirpation of a healthy movable kidney is a barbarism.

To summarize what has been said: The treatment of movable kidney is first dietetic to restore the subnormal weight to normal or above. This is best done with pure milk and requires two or three months for its accomplishment. It removes all subjective and objective symptoms. Second, in floating kidney with altered gland, in movable kidney with normal or plus body weight and in cases of failure of the milk treatment and persistence of distressing symptoms, the operation of nephrorraphy. This operation of suturing the kidney to its normal bed will be seldom, very seldom found needed.

THE OUTLINING OF NORMAL ORGANS AND THE DIAGNOSTICATING OF DISEASED CONDITIONS OF THE PLEURA AND LUNGS BY MEANS OF PALPATION.*

By F. M. POTTENGER, A. M., M. D., L.L. D., of Monrovia, California.

In offering to the profession the two apparently new methods of diagnosis which I shall describe to-day, I wish to state at the outset that I do not expect them to displace old and approved methods, nor do I expect them to enable the practitioner to make a sure and easy diagnosis. I offer them simply as supplementary to the old and long tried methods, but with the candid belief that when thoroughly appreciated they will facilitate diagnosis at least in certain cases.

I realize also that it is best in presenting new signs and methods, to demonstrate them on the living subject; so, I have brought several patients here this afternoon that I may be able to show you clearly what these new signs are; and, allow me to say, these are not picked cases for the demonstration of *muscle rigidity*, but the sign appears in nearly all cases, except those where the inflammation is exceedingly slight, about as clearly as you see it here.

When we consider the millions of chests that have been examined, not only by general practitioners of medicine, but by the masters in the art of diagnosis, we cannot help believing that the signs which I shall present to you to-day must have been appreciated by them; yet, so far, I have been able to find no reference in the literature to "muscle rigidity," as I describe it, neither have I found any one who has seemed to know of its presence. I have heard numerous rumors concerning the ability to outline the heart and liver by means of touch, and I am positive that many men have been using this sense of touch, some without fully appreciating it, in examining these organs; but, so far, I have not been able to find anywhere a definite statement to the effect that we are able to differentiate, by simple touch, organs or parts of organs of different density when situated within the cavities of the body; nor have I found anywhere a statement of the ability to do this by the lightest touch of the skin by what I have chosen to call "light touch palpation."

The two physical signs which I wish to show you to-day are:

I. **MUSCLE RIGIDITY**; which may be described as a feeling of resistance noted on palpating the muscles which overlie inflammatory conditions affecting the pulmonary parenchyma or pleura due to (1), acute muscle spasm when the inflammation is acute; and (2), pathological change in the muscles when the inflammation is chronic.

*Read before the Thirty-fifth Annual Meeting of the Mississippi Valley Medical Association, St. Louis, Mo., October 12-14, 1909.

II. A feeling of different degrees of resistance noted over organs or parts of organs of different density on LIGHT TOUCH PALPATION.

It can be understood from this statement of the two signs that they are clearly distinct. *Muscle rigidity* is confined to the muscles alone, while the difference in resistance found on *light touch palpation* applies to the density of tissues as found not only in the muscles but the deeper organs as well and may be used in outlining either normal organs or areas of disease, where such disease produces change in density of any of the tissues which we are able to palpate. In spite of this great difference, confusion of the two signs has already arisen in the minds of some who have learned of them. The reasons which lead to the confusion are, first, that both signs are found on palpation; and, second, *muscle rigidity*, being due to altered density of the muscle tissue, can be determined by comparing the findings on *light touch palpation* over the altered muscles with that found over normal muscles.

With the full appreciation of these two signs, palpation at once assumes a new significance and takes its place as a very important method of examination.

Muscle rigidity, as mentioned above, is due either to acute spasm or chronic pathological change. The explanation of its cause leads us into the difficult field of physiology of the nervous system, and especially that of the reflexes and the sympathetic system concerning which there is so much information still desired. The most plausible explanation is that the inflammatory process in the lung or pleura, the same as in the causation of the spasm in appendicitis and other diseases of the abdominal viscera, acts as the stimulant which is carried through the sympathetic nervous system to the cord where it stimulates not only its own cell but adjacent cells, thus involving the motor cells in the same segment of the cord; the impulse being reflected along the motor fibres to the muscle, causing it to contract. The irritant being constant, the spasm is tonic in character. But, finally, as a probable result of the constant stimulation of the nerve, the muscle undergoes pathological change. Examined microscopically it shows degeneration; at times, destruction of the muscle bundles with attempt at repair. To the touch the muscle is more resistant, firmer than normal, the same as it is when the seat of acute spasm, but it has a doughy feeling, owing to the fact that it has lost its normal elasticity.

Consequently, whether the causative inflammatory process in the lung or pleura be acute or chronic, the muscles assume an increased feeling of resistance to the touch. While, as yet, I have not examined the muscles microscopically in chronic inflammation of the abdominal organs, yet on theoretical grounds I should expect the same conditions to obtain.

For practical clinical purposes patients showing *muscle rigidity* naturally divide themselves into four groups:

1. Those whose lungs and pleura have not previously been the seat of chronic inflammation, and are now affected by an active process. In

such cases we have the greatest degree of muscular spasm, because the muscles, being normal, are best able to respond to the stimulation. This shows in acute pleurisy, pneumonia, and early active tuberculosis processes. Its presence in these cases is what makes it especially valuable in diagnosis. In early active tuberculous lesions the muscle spasm offers a very reliable indication of the underlying disease. Theoretically, it should be present as soon as the disease occurs in the lung or pleura, but, of course, it is possible that the slightest inflammatory conditions cause so slight a spasm that it might go unrecognized clinically; my experience, however, warrants the assertion that it appears very early and, I am sure, that in some cases where I have found it, it would offer the general practitioner of medicine opportunity of making an early diagnosis before he could probably do so by the usual time-honored methods. It seems to me that it might be very practical in determining the presence of a central pneumonia. While I have not had the opportunity of testing it in these cases, yet, on theoretical grounds, I feel safe in believing that it is present.

2. The second group of cases which shows *muscle rigidity* is the chronic cases with extensive lesions, whose muscles have undergone pathological change, and lost their normal elasticity. These are quite easy to detect by their resistance and doughy feeling on touch.

3. Group three comprises those whose muscles are pathologically changed, owing to a chronic inflammation, and whose chests are at the time of examination again the seat of an active process, thus giving the picture of a spasm of a degenerated muscle.

4. Group four comprises that class of cases who have a small focus which is not, at the time of examination neither has it ever been, the seat of much activity. Here the sign is often extremely hard to find.

In the first three groups the sign is easy of detection and of great value. In fact it can often be determined by simple inspection. In the last its presence is difficult to detect.

This classification at once suggests that this sign is of value in just the cases in which we desire the most help, namely, where we wish to determine whether the disease is active or not. Neither percussion nor auscultation can be relied upon to give positive evidence of the presence of activity, but when we find a spasm of the muscles present I believe we can say with certainty that an active process lies underneath the muscles which are in a state of spasm. In examining a great many cases, so far I have not found a single exception to this rule.

In other papers 1, 2, 3, I have discussed the bearing of *muscle change* upon some of our most prominent physical signs in disease of the chest, and especially those which aid in early diagnosis of tuberculosis. I have shown that it is an important factor in the production of the lessened motion over affected areas, the lessened respiratory note, the prolonged expiration, harshened breathing, and changes on percussion. I have also shown how it is probably the primary factor in the production

of ankylosis of the costosternal articulation as described by Freund^{4, 5} and Hart⁶, Hart und Harrass⁷, and how this early spasm, when confined to one side, can produce twisting and curvature of the spinal column.

With this brief description of muscle rigidity it can readily be seen that its significance reaches far beyond its value as a sign in physical diagnosis. It offers us a rational explanation of other phenomena that have long been observed, some of which have been considered as most reliable physical signs in disease of the chest.

The ability to outline organs by *light touch palpation*⁸ may be considered a refinement in diagnosis by some, but it is a refinement that can be made extremely valuable and practical. It supplements percussion and auscultatory percussion in a very satisfactory manner, and, for those who are not expert at percussion or who have not learned to detect percussion resistance, and whose hearing is not acute, it can be made a most valuable aid.

In outlining the heart I have compared its findings with the orthodiagraph and am pleased to say that it is very accurate. In the tests, I mapped out the heart by *light touch palpation* with a blue pencil, then the orthodiagraph was put on and without seeing my marks the heart was again outlined with a red pencil; and in sixty per cent. of the normal chests both methods coincided, in eighty per cent. the right border was correct and in eighty per cent. the left was correct. In the instances where I failed, the error ranged from $\frac{1}{2}$ to $1\frac{1}{2}$ centimeters.

It is surprising to learn that it is possible to detect the edge of the heart and liver by light touch even when covered by lung.

One caution I must offer, and that is not to palpate deeply. Only the lightest touch, barely touching the skin, is necessary. In fact, deep pressure interferes with the most sensitive touch.

Difficulties arise in outlining the heart by *light touch palpation* when the chest is covered with hair, when the subcutaneous and muscular tissues are too thick, or when they are very thin. Another difficulty arises in outlining the right border when the ribs form an acute projecting angle, as they sometimes do. If either border lies beneath the sternum, as sometimes occurs in displacement of the organ, of course difficulty arises. Knowing these difficulties, and perhaps others that will be observed, they do not need to impair the value of the sign.

It is necessary in using *light touch palpation* to confine the touch to soft tissue when possible, although it is possible to outline the deep organs through the rib and sternum. Thus in outlining the heart, begin wide beyond the border of the organ in the intercostal space, and come gradually toward the heart until the border is reached. The border of the heart will be recognized by a slight feeling of resistance to the palpating finger. In order to appreciate this the field of touch must be confined to the intercostal space, otherwise, when the rib is crossed, the increased density of tissue corresponding to the rib may deceive the examiner and be taken for the heart border.

The liver and spleen can also be outlined in this way and changes in density of the musculature caused by underlying inflammation of the pleura and pulmonary parenchyma—*muscle rigidity*—may be easily detected.

My first opinion was that this resistance was a reflex of the *erectores pili*, but I am now convinced, since it can be detected in the cadaver as well as on the living subject, that if there is a reflex element in it, it is not the most important, but that this sign depends on our ability to note the difference between tissues of different density even when lying within the hollow cavities of the body, by feeling through the body walls by extremely delicate palpation.

That these signs are practical for the general practitioner of medicine I have reason to believe from the fact that I have shown them to many physicians and almost without exception they were able to appreciate them; and many are using them in their practice.

My thanks are due to Professor Ghon and Docent Bartel, of the Pathological Institute in Vienna, who assisted me in working out the pathological changes in the muscles, and to Dr. Schwartz, assistant in Holzknecht's α -ray laboratory of the University of Vienna, for his kind assistance in proving the results of *light touch palpation* in outlining the heart by the orthodiagraph.

BIBLIOGRAPHY.

1. Pottenger. A New Physical Sign Found in the Presence of Inflammatory Conditions of the Lungs and Pleura.—*Journal of the American Medical Association*, March 6, 1909.
2. Pottenger. Spasm of the Chest Muscles, Particularly the Intercostals, as a Physical Sign of Disease of the Lungs.—*American Journal of the Medical Sciences*, May, 1909.
3. Pottenger. Further Observations Upon Rigidity of the Chest Muscles as a Sign of Involvement of the Pulmonary Parenchyma.—*Medical Record*, October 23, 1909.
4. Freund. Beitræge zur Histologie der Rippenknorpel im normalen pathol. Zustande. 1858.
5. Freund. Thoraxanomalien als Predisposition zu Lungenphthise u. Emphysem. *Verhandl. der Berl. med. Gesellschaft*. 27 Nov., 1901.
6. Hart. Die mechanische Disposition der Lungenspitzen zur tuberkulösen Phthise, 1906.
7. Hart und Harrass. Der Thorax Phthisicus, eine Anatomische physiologische Studie, Stuttgart, 1908.
8. Pottenger. A New Physical Sign, Probably a Skin Reflex, Whereby Solid Organs, such as the Heart and Liver and Inflammatory Processes Found in the Lungs and Pleura, May be Detected by Palpation.—*Medical Record*, October 23, 1909.

LABOR AS A FACTOR IN PELVIC DISEASE.*

By JAMES E. KING, M. D., of Buffalo, N. Y.

Ajd. Prof. Obstetrics, Univ., Buffalo; Att. Gynecologist, General and Erie County Hospitals; Fellow Royal Society Medicine, London, etc.

Many of the ills which the surgeon is called upon to treat are due either to abortion or to labor at term. Abortion, criminal or natural, is an especially frequent factor in pelvic lesions, but it is not the purpose of this paper to discuss abortion and its results, but only those conditions which are due to labor at term.

Parturition, as a perfectly physiological process, should be followed, theoretically at least, by no abnormal symptoms or condition. As a matter of fact, however, so frequently do we hear from a patient that her troubles began after the birth of her child, that we expect to hear the same from almost every patient who has borne children. The writer has been interested to analyze many of these cases; some of the conditions were found incidental to labor and not the result of it. For example, a gonorrheal infection acquired soon after the puerperium, is frequently ascribed by the patient to the labor. Even, however, eliminating all such cases there remains a goodly number of women who can clearly date their ill health from a confinement.

We might naturally expect that a severe or complicated labor is more apt to result in sequelæ than an easy one. If we are guided entirely by the statements of patients, we would be justified in believing that such is the case. Many of the most troublesome conditions are the result of normal, comparatively easy labors. The writer has had considerable difficulty in gathering data from patients that would give a correct notion of the character of the labors. Sometimes the statements are very misleading, but careful questioning will show that what at first appears as a complicated labor was really a perfectly normal one. With a history of forceps, it is seldom possible to determine with any reasonable degree of certainty whether they were high, low or medium. The same is true of infections and, beyond a history of fever, usually nothing is learned. Cases referred to a surgeon are, however, often accompanied by a history of the labor from the physician who attended the patient; and these cases, together with those seen in consultation at the time of confinement, shed considerable light upon labor as the cause of pelvic conditions. The few observations which the writer wishes to present are based upon cases from hospital, private and dispensary practice. The frequency with which the various lesions appear depend upon from which source the cases were

*Read before the Rochester, N. Y., Pathological Society, October 7, 1909.

drawn, and therefore no attempt has been made to state the relative frequency with which the various conditions are found.

For the purposes of classification, a rough grouping of the cases has been made, based upon the pelvic findings. Such a grouping must necessarily be more or less arbitrary because of the frequency with which several conditions may be associated. In Group 1 may be placed: Injuries to the pelvic floor and cervix; Group 2, Displacements, retro and downward; Group 3, Pathologic tissue changes.

Before passing to a consideration of the conditions under the above grouping, the writer wishes to make brief reference to a frequently unrecognized condition that may have its origin in labor. The patient presents herself with symptoms that are a composite of "all the ills that flesh is heir to." Symptoms referable to the abdominal and pelvic organs and nervous system predominate. Careful pelvic examination shows no pathology. Such a patient belongs to that large but little understood class of neurasthenics. She is the obstetric neurasthenic. The same condition may be seen following operation, or any shock or trauma, only in this instance the causal factor is labor. It is usually seen in nervous impressionable women after first babies. She is deserving of the utmost consideration and often receives the least. This type of patient is most often found in private practice among the well-to-do and they often add materially to a lucrative clientele, so that their existence may not be considered an unmixed evil. The treatment of such a patient often begins with a curettage and then more or less rapidly she runs the gamut of the specialties. Or a slight cervical laceration is assumed, erroneously I think, to be the seat of the trouble, and repaired. Surgery should be avoided in such cases, for it usually makes matters worse. Fortunate is such a patient if she falls into the hands of a physician who treats the woman and not the womb.

Passing now to our classification, we find under the first group cervical and perineal injuries. Of the two, in the writer's experience, the cervical lacerations appear rather the more often for treatment. Not because they occur more often, but because perineal lacerations are usually repaired at the time of labor. The leucorrhea and subinvolution, that often accompany cervical tears, produce most of the symptoms that bring the patient to her physician. In addition to this may also be found markedly thickened and tender utero-sacral ligaments which contribute no small part to the discomfort of the patient. The question of immediate repair of cervical laceration has lately received considerable attention and opinion is divided as to its practicability. The writer's attempt at immediate repair in a few cases did not give satisfactory results and he is inclined to believe that delay for several days will give better and more certain union. This plan is carried out in some of the large lying-in-hospitals with complete success. For the prevention of cervical laceration, we have little that is practical. The forceps are old offenders, and in a consider-

able proportion of cervical tears there is obtained a history of instrumental delivery.

Perineal tears are seen oftenest in hospital and dispensary practice. They can, not infrequently, be traced to attendance by mid-wife or to cases whose medical attendant has been too busy or too ill-paid to attend to such detail. Ordinarily, however, such injuries are repaired at the time of labor. Indeed, minor tears with small vaginal involvement are best sutured while waiting for the placenta. Tears of second degree, however, extending well into the vagina, on one or both sides, unite best when sutured several days after the labor, when with good light, proper anæsthesia and good position the laceration may be sutured with good hope of restoring the normal relation of the parts. Even third degree tears can be repaired at this time with complete success. Many times a tired doctor, in a poor light, with his nervous, perhaps struggling patient in a sagging bed, places two or three silk worm sutures through the perineum. It is seldom that such stitches bring the vaginal wall into apposition and this part of the tear is left to take care of itself. Such a state of affairs results in the so-called relaxed vaginal outlet, which carries its promise of a rectocele later. Tears occasionally involve the vagina only without extending to the perineal body. If such injuries are not repaired the foundation for rectocele is laid. If the repair of the more extensive perineal tears is delayed for several days, a cervical tear can be sutured at the same time. This, it seems, would be a forceful argument for delay in such cases and the writer believes that some day cervical lacerations will receive the same attention as now do perineal tears.

Under the second group or group of displacements, we find, prominently, retroversion and prolapsus, with their protean manifestations. It is difficult to say how often a previously proper positioned uterus retroverts as an effect of labor, for the reason that a symptomless retroversion before pregnancy may become a troublesome one after labor. Still there is no doubt but what labor often acts as a causal factor in retroversion. No sequelæ of labor so strongly emphasizes the expediency of the post-partum examination. If three weeks after labor a uterus is found, large and heavy, which has a tendency to backward displacement, a properly fitted pessary may forestall a retroversion that takes its origin at that time, or may cure a pre-existing one. The writer believes, too, that the obstetric binder may have an influence, at times, in aiding displacement. In women with a thin abdomen and the uterus standing up prominently, a tightly applied bandage will tend to press the fundus back. To make matters worse, sometimes is also added a towel or two to form a pad beneath the binder.

A uterine prolapse is usually developed by a slow process as a result of retroversion. Still, sometimes, shortly after the woman rises after puerperium, a noticeable degree of prolapse may be found without necessarily any marked retro-displacement. Such conditions seem to be associated with stretching of the utero-sacral ligaments. In this connection it is

not unusual to find, soon after labor, a prolapsed anterior vaginal wall. In three instances the writer was able to trace such a condition to the use of forceps. In two cases forceps were used to drag a well advanced head through an imperfectly dilated cervix. Each traction on the forceps brought the cervical rim, as well as the anterior vaginal wall, well down into the vulva, which resulted in a stretching of all the supports which seemed never again to regain their normal tone. The third instance was a large head which as it advanced with traction, brought down conspicuously before it a large fold of the vaginal wall. Such a state of affairs might be avoided in part by pressing back the cervix and vaginal wall when traction is made. If, however, such a condition is found post-partum, a pessary will do much to give a sense of relief to the patient and also aid in restoring a normal tone to the tissues.

In the third group or cases embracing pathologic tissue change, endometritis and subinvolution are foremost in frequency. Endometritis is usually secondary to some other condition. The primary cases most commonly follow the retention of clots or bits of placenta with putrefaction. As a part of a general condition, it is seen in poorly nourished women who have convalesced badly. One of the most constant symptoms of which these patients complain, is a soreness across the lower abdomen. Walking or driving will cause it to be plainly felt. The uterus is sore to pressure and bimanual examination, or even pressure of the finger through the vaginal wall against the uterus elicits pain. Curettage here does not always prove of value and in cases associated with a general condition, such as just described, it is better to try and restore first the general health, assuming that the endometritis is an effect and not a cause.

Subinvolution is often a preventable, and like endometritis, many times a secondary condition. As a condition per se, a history of clots or bits of placenta coming away during the puerperium is not uncommon. There is no doubt, too, that it may be caused by the women getting about too soon. Some physicians keep their patients in bed nine or ten days and then allow them to sit up regardless of the size of the uterus. Such a system does not seem to be scientific obstetrics. Other things being equal, the time in bed should be determined by the involution. A large uterus, even at the end of three weeks, should mean rest and treatment.

To enter under this group into a discussion of the late results of puerperal infections, involves too large a subject for this time. They, of course, constitute a considerable proportion of the cases and they present an extremely varied pathology. In passing it may be said that in hospital practice a large proportion of such cases are supplied from the practice of midwives. The implied suggestion that is contained in this statement is obvious.

In trying to find the reasons for so many preventable pelvic conditions that result from labor, we find that there are certain factors that can never be eliminated. For example, many cases are clearly beyond our

control. A working woman has neither the time nor the care for a proper convalescence. She may have eight other children that demand her care and on the third or fourth day gets up to do the family wash. Even this situation might be met by providing hospitals for such women, granting that they could be persuaded to go to such institutions. In Europe such hospitals are supported by the government and the women of the poorer classes expect to go to them as a matter of course.

Other cases are due to either ignorance or wilful neglect. The consultant is often astonished at the failure of some men even to attempt a diagnosis of position. They drop to the level of the midwife instead of practicing scientific obstetrics. Such men will essay to apply forceps without the slightest notions of the relations of head and pelvis. This situation is one for the medical schools; it is at their door that the fault lies, and they hold the remedy as well.

Another reason resolves itself into dollars and cents. The inadequate compensation for a good deal of obstetric work does not permit a busy physician to devote the time and attention that such cases demand. It is a fact that there is no branch of medicine that is so ill paid as that of obstetrics. Such a state of affairs is partly due to the medical men themselves, and partly to the fact that the poor will persist in having children; and the more children they have so much the less able are they to pay a fee for medical attendance for the next.

The last and most important reason for pelvic conditions following labor is the failure of physicians to make routine post-partum examinations. A painstaking examination three or four weeks after labor will often disclose conditions which intelligent treatment would correct and in this way would be prevented many of the lesions that come to the surgeon for treatment.

LECTURES ON PSYCHIATRY.

(PLANNED TO INCLUDE SIXTEEN EXERCISES FOR SENIOR STUDENTS.)

By SIDNEY I. SCHWAB, M. D., of St. Louis.
Professor of Nervous and Mental Diseases, St. Louis University Medical School.

LECTURE 2.

A short sketch of the history of psychiatry will show clearly how the development of our knowledge of mental disease has come about and in what manner medical science as a whole has influenced it and been influenced by it. Historically considered, psychiatry has shared in the progress which knowledge in other departments has achieved, though it has never shown the brilliant and sudden advances in times when learning in general was at its highest; yet its development has been, on the whole, steady and can be measured less by the rigid achievements of exact knowledge than by a certain evolution towards improvement in the social conditions of a people.

On the whole it can be said that the condition of the insane reflected in the past the general state of a people's civilization, and bore a certain relation to the development of what might be termed institutional medicine. It must be admitted, however, that at all times, except at the present,—and this is only true of advanced communities,—psychiatry was the least favored of a State's dependents to share in the influence which advances in medicine brought about. The State's care of the insane, or rather, the concern of the State in the welfare of its indigent insane, might be taken as a measure of its advancement. The reason for this is that insanity is a very personal disease, as it may be termed, and touches not alone the physical aspect of an individual, but involves also his position as a member of the community in a very direct way and the consequences of a proper therapy touches the question of personal liberty and privilege, two important things in the life of an individual which other diseases involve only in an indirect manner.

There are two important points from which the history of psychiatry can be viewed and which will enable you, even in so brief a sketch as this, to obtain some general idea of its varied fate in the general history of mankind's development. One of these points of view, has reference to the origin and the evolution of the idea that some disturbance of the brain itself is a necessary condition of mental disease. Naturally this is but an additional step to the conception that the mechanism of all mental activity has its place of origin in the central nervous system; that is, in the brain itself. The other point of view has reference to the place

in society which individuals with mental diseases occupy. This is concerned with the attitude of physicians and laymen towards insanity, both in the individual case and with the problem as a whole. The former point of view is concerned with the history of the development of an idea; the second point of view with the history of the development of society as a whole. The first of these represents a remarkable phase in intellectual evolution, the succession of steps by which the conception of the relationship between the nervous system and psychical activity came about extends over many centuries, and its conclusion that this relationship is intimate, necessary and final, forms the basis upon which present day psychiatry rests. The gist of this conclusion may be stated in this way, representing as it does the final conclusion of years of observation and deductive reasoning: The mind or soul has its anatomical seat in the brain, the physiological activity of which finds its highest, most intricate and most human expression in the phenomenon of what we call consciousness. To define consciousness further, at the present moment, is not required. It is assumed that consciousness is the necessary unique characteristic of all normal human beings. Disturbances of various kinds which tend to create abnormal states of consciousness by virtue of which the normal expression of its activity in will, action or thought, affecting conduct as its outward indication produce the phenomenon which we call insanity. This, in a very brief and somewhat dogmatic manner, may be set down as the conclusion and the present result of the evolution of this long intellectual struggle. The history of the social aspect of the development of insanity forms a narrative which has an intimate relationship with the history of medicine as a whole. The brief story of the rise of psychiatry from a rough and crude aspect of demoniacal possession to its present state as an important and rapidly growing department of scientific medicine, is, briefly, as follows:

The earlier and primitive periods in the history of mankind might be considered an epoch, during which the conception of insanity was bound up in the religious notions of the people. An insane individual was looked upon as being either the subject of divine inspiration or as the victim of demoniac possession. Naturally, out of such a conception, no rational therapy or any rational attitudes toward insanity could be developed. This primitive period ended when Pythagoras established in Kroton, during the last quarter of the sixth century, B. C., a school of physiology and hygiene. From this, the Hippocratic era was ushered in. This was the era during which the objective examination of sick people was emphasized, and the insane were looked upon much the same as other sick people, and were regarded from the human point of view, from the prognosis, treatment and etiology. This Hippocratic period may be said to have extended to the third century, A. D., a time fixed by Galen, who was the last of the great ancient physicians.

Hippocrates really laid the foundation of psychiatry when he clearly expressed the proposition that in the brain was located the function of

the mind or understanding, and that therefore disease of the brain causes disease of the mind. Hippocrates recognized clearly the condition called melancholia and its sister symptom-complex, mania, regarding the latter as a sort of prodromal stage to the former. The ancients of this period regarded the cause of melancholia to be due to the collection of black, thick bile, or other corroding substances, which tended to flow towards the brain and, like a cloud, to darken the organ of thinking. During this period a considerable number of mental diseases were described with a degree of accuracy that even to-day is astonishing. Melancholia and mania were well known, and there was even a hint of the notion that they could be considered as different phases of the same disease. Hysterical and somnambulistic states were recognized, epilepsy and apoplexy likewise. There was even an indication of the idea that a difference existed between psychoses which showed themselves in emotional expression and those which showed evidences of deterioration. Shortly after this, we approach the beginning of the Middle Ages, during which medicine, in common with other branches of learning, declined. For a period of almost fifteen hundred years, there was neither advance in a knowledge of insanity itself as a science nor in the popular conception of insanity as a disease. In fact, we here meet a very low ebb in the history of human ignorance. The prevailing opinion was that man was composed of a spiritual and physical something, and that there was a constant struggle between the two; that insanity represented the victory of the evil spirit over the good. Consequently, an insane man was regarded as being possessed of the devil and his treatment was regulated accordingly. They were considered to be beyond the pale of society and almost beyond the protection of the law. The violent and dangerous ones were locked up in prisons, towers or underground chambers, with no regard to the needs of light, air or other hygienic necessities. On holidays, the insane were exhibited for fees to a curious public. The patients with mental disturbance of a milder form were allowed to run at large, receiving no care whatever. A temporary renaissance of psychiatry took place coincident with the life and activity of Felix Plater, Basle, 1536 to 1614. He was the first man who attempted a classification of insanity, or who, for twelve hundred years, had regarded the insane as worthy of study. Plater distinguished between congenital and acquired conditions, and described cases of idiocy and cretinism. The general scheme of classification is interesting; it is as follows: A. Lesions by defect: (1) Mental weakness, idiocy and imbecility; (2) mental abolition, epilepsy, apoplexy, etc. B. Lesions by deprivation: (1) Mental alienation, mania, melancholia, etc.; (2) mental anxiety, that is insomnia, etc. Plater, himself, noted the abuses which existed in the treatment of the insane and tried to gain for them greater liberty and humanity. His greatest service, however, was in reinstating methods of careful clinical study rather than in introducing effectual reforms in treatment. It took two

hundred years to accomplish the latter and it is not accomplished everywhere yet.

Up to the middle of the eighteenth century Austrian insane patients were confined in jails where they were chained and fed like animals. The populace was accustomed to walk out to this place of confinement on Sundays and holidays and pay the guards a tip to show them the ravings of the maniacs behind the bars.

In the later part of the eighteenth century, Pinel, in the old Salpetriere Hospital, which was later to see the rejuvenation of French neurology under the master hand of Charcot, introduced the more humane treatment of the insane by insisting upon the removal of the coarse methods of restraint then in vogue and instituting the rational ideas of therapy which led to the conceptions now a matter of common routine in well conducted institutions. In England, about 1830, the no restraint idea, promulgated largely through the efforts of Connolly, came in use, and from that time there has been a steady and progressive development towards the point of view of regarding the insane as individuals with a definite disease that should be treated like other patients in a hospital. Some of the significant features of this movement are the establishment of psychopathic wards in general hospitals the after care societies, epileptic colonies, and the special institutions for the criminal insane. The recent bequest to Johns Hopkins by Mr. Phipps for the establishment of a psychopathic hospital is the most notable attempt yet made in this country to afford proper opportunity under university direction for the study of the problem presented by mental disease.

Insanity must be regarded as a universal disease which is met with in all countries and among all peoples. Its frequency, as can be shown by statistical study, is 1 to 384 in Germany, 1 to 300 in England, and according to the reports of associated asylums, in New York, 1 to 295. The latter State has at the present time an excellently organized State provision and supervision, and with a population of eight millions 1 of every 280 persons in that State is under the supervision of the Lunacy Commission. It can be seen from these statistics that the number of insane is very large and that forms no very inconsiderable proportion of the inhabitants of any community.

The question of the increase of insanity is important. There is a tendency to regard it as steadily increasing. It is very difficult to obtain the truth in regard to this question, as statistics are of very little value, with the exception of those collected in recent years and in States where the institutional care of the insane is well developed. It might be said that the increase in the ratio of the sane to the insane may perhaps be due to an earlier recognition of cases of insanity and to their more ready admission into asylums from which all statistics of value are taken. If there is an increase in the amount of insanity it probably goes hand in hand with the increase in syphilitic infection and with the increase of alcoholism. It is very possible that the increase in the number of in-

sane means simply the increase in the number of cases of dementia paralytica, which is the best example of an acquired form of insanity.

The general causes of insanity are somewhat difficult of description, as it is impossible to gauge the exact relationship between the causes that seem apparent and the effects of disease which follow. It might be said generally that no single factor stands out as the absolute cause of any single type of insanity, with the exception of syphilis in the causation of dementia paralytica. Even in this disease there are certain interposing steps before the development of the disease takes place which may have a great influence in determining its occurrence. There are, on the other hand, certain predisposing or favoring conditions rather than causes, which bear at all times a very important relation to individual outbreaks of mental symptoms. Yet it must be understood that these conditions of themselves are very seldom directly responsible for an attack of mental disease. The complicated methods of living, the difficulty of obtaining a livelihood, the struggle for actual existence, the increase in the consumption of alcohol and the spread of syphilis, are undoubtedly causes which favor the tendencies inherent in some organizations towards those abnormal states of consciousness which are termed "insanity." Undoubtedly, the chief positive etiological factor in the causation of insanity is in general terms hereditary. This is construed to be a congenitally unstable nervous system which is unable to resist the stresses and strains and other burdens which are placed upon it in an ordinary life time and by an ordinary life's experience. Such a nervous system congenitally weakened in this way, responds under certain conditions by giving rise to phenomena on the part of the nervous system which must be considered abnormal and which constitute a clinical picture which we call "insanity." In about 20 to 30 per cent. of all cases of insanity such a feature of heredity can be demonstrated. From 20 to 25 per cent. will show acquired causes in the way of syphilis and alcoholism; for the remainder there is practically no positive cause. It is said that the influence of heredity depends largely upon its degree, that the more instances of insanity in the family line, the greater its significance becomes. This is not altogether true; the nature and the degree plus the environment and other conditions must be factors reckoned with. The individuals coming from a stock hereditarily tainted or not, who exhibit from infancy peculiarities which separate them from the greater majority of the normal of their kind and position, are to be considered as favorable soil upon which insanity in any of its forms is given a chance to develop. In such individuals the effect of any of the indirect causes of insanity are active in a greater degree than the normal.

The term "degenerate" has received a great deal of importance and is defined by Morel as one whose brain and nervous system are unstable; who has in consequence, undergone imperfectly embryological changes to a higher type in tissues or organs, and therefore exhibits tendencies liable

to extinguish the race as a type under the usual conditions of the struggle for existence.

It was formerly supposed that degenerates could be diagnosed from certain imperfections which are known as the stigmata of degeneracy. It is now no longer thought that such physical signs are essential or, indeed, characteristic. The immediate factors which present predisposing and favoring opportunities for the outbreak of any individual case of insanity are puberty, climacterium, old age, pregnancy, parturition, puerperium and lactation.

There are certain causes which bear so indirect relation with the outbreak of a case of mental disease that they must be considered in a general notion as to causes. There is found in the past history of certain cases of insanity certain very definite experiences which are so closely related in point of time to the occurrence of mental symptoms as to suggest the relation of cause and effect. It is true, however, that certain evidences of mental aberration may have existed before they were brought to the notice of friends and relatives after the so-called causative factor has appeared. Such causes, which may be called direct, are as follows: Psychic trauma, physical trauma, diseases of the nervous system, infectious diseases, alcohol, lead poisoning, syphilis, cocaine, morphine, etc.

SPECIAL ARTICLES.

NOTES ON PELLAGRA.

By LOUIS M. WARFIELD, M. D., of Savannah, Ga.

At Columbia, S. C., on November 3 and 4 in the hall of the South Carolina State Asylum for the Insane, was held a most important and interesting conference. Whether it was the novelty of the disease under discussion, or whether there was a real undercurrent of actual alarm at the wide-spread prevalence of pellagra, is of no moment. *The fact that over four hundred physicians from many states and from all branches of the Government medical service were there to gather information, attests the universal feeling in regard to pellagra. Representatives of many State insane asylums were also present, some to report on cases seen in their respective asylums, others to collect data which would be of assistance to them in the study of cases. No one of the Committee of Arrangements from the South Carolina State Board of Health anticipated such a large gathering. The idea which was first entertained of having a local conference was soon expanded to one of national and even of international scope. There were a number of papers from foreign authors. The objects of the conference were to get bearings on what was already known and to derive encouragement for further research. There can be no doubt but that the conference was in every way a signal success.

There have been so many excellent articles published recently in American journals which give full accounts of the history and symptomatology of the disease, that we shall only report briefly the points which seemed to us to be of particular interest.

What is this disease, known as pellagra, which during the past year has been reported from thirteen states from Florida to Illinois, and which, at present, it is conservatively estimated affects over 5000 people? There is much to make us pause for breath at such figures, especially when we recall that only two short years ago we were resting securely in the belief that there was no such disease among our population. Frankly, we do not know what pellagra is due to, or why it should be with us. With the increased knowledge of the disease, cases are being recognized here and there as pellagra, which for years defied diagnosis. There can be no doubt that the disease has been present in this country for many years. Those who took part in the conference not only re-

called cases seen by them ten and fifteen years ago which they are sure were pellagra cases, but there are actual notes written in autopsy records describing lesions of the hands and feet, which leave no doubt in the unprejudiced mind that they were cases of true pellagra. It is not a new disease. It is rather strange that it should have remained unrecognized for so long a time. To Dr. J. W. Babcock, of the State Insane Asylum at Columbia, S. C., is due the credit of calling particular attention to the existence and importance of the disease in this country.

Dr. Geo. A. Zeller, Superintendent of the Illinois Insane Asylum at Peoria, read an excellent paper, and reported a truly startling condition of affairs at the asylum. He told how his attention had been called to the disease by seeing the reports of Searcy, Babcock, Watson and others. Only last summer did he begin to suspect that there were cases at the asylum. Experts were sent for, and, on August 9th, twenty cases were discovered on a hasty examination of the inmates. Immediately a commission was appointed to investigate the problem, and Captains Siler and Nichols of the Army Medical Corps, were detailed by the Government to report on the cases. Since August 10, 1909, there have been 130 well-defined, undoubted cases of pellagra and 100 suspected cases among 2000 inmates. Of the pellagrins, 75 were women and 55 were men. Of these 45 have died, and autopsies were performed on 36.

Dr. F. M. Sandwith, of London, sent a paper. He stated that maize had been introduced into Egypt from Syria about 1840, but it was not until 1893 that pellagra was recognized. In 1900 there were cases discovered in South Africa. While in Boston, Mass., in 1905, he had seen a case in an Italian. He thought that it should be made a reportable disease and that there should be inspection of immigrants at ports of entry. Since 1888 there had been registration of cases in Italy.

Pellagra, as is well known now, has existed in Spain and Italy since the middle of the 18th century. At the conference it was reported from Egypt, Arabia, Yucatan, and Jamaica also.

The etiology is not known. There were some interesting papers dealing with this part of the subject; but no new light was thrown on our dense ignorance. Thus far no bacterium has been found that is constantly present. Blood, blood serum, macerated liver, spleen, and brain have been injected into the usual laboratory animals with absolutely no result. Lombroso's pellagrozin, the toxin obtained from diseased maize, was accorded scarcely a passing word. Examinations and cultures of blood and spinal fluid have revealed nothing in the nature of a protozoon. The blood changes are not characteristic. There is usually anemia of a chlorotic type. Lavinder reported a number of leucocyte and differential counts. He found usually a normal number of leucocytes. There was an increase in the number of large mononuclears. Eosinophilia depended upon associated infection with intestinal parasites. These findings were practically confirmed by Siler and Nichols.

Asst. Surgeon General Kerr, U. S. P. H. and M. H. Service, called

attention to the fact that both beri-beri and pellagra were thought to be caused by damaged food, the former by spoiled rice, the latter by spoiled corn. Again it was suggested by Taylor, of Columbia, that the diseases pellagra, sleeping sickness, and syphilis have much in common, and in view of the fact that the last two are due to protozoa, it may be that pellagra will be found also to be a disease caused by a protozoon.

That there is some relationship between the eating of spoiled or damaged corn and the development of pellagra, seemed to be the consensus of opinion. The foreign authors took it for granted that the eating of spoiled corn caused pellagra. The Americans were more conservative as a rule. The impression gained was that there was unquestionably some real relationship between damaged corn and pellagra, but that in the present state of our knowledge we could not say that it was the actual cause. Possibly, it was suggested, there was some substance in the spoiled corn which, when acted upon by the digestive juices, activated the real cause (bacterial, or protozoan, or chemical).

It was stated that the manner of treating the maturing corn differs from that formerly in use. Up to a few years ago the stalks were stripped and the grain on the ear was allowed to mature in the fields on the stalk. The corn so treated is thoroughly dry, and the grains are free from mold and rust. For several years past farmers throughout the great corn growing area in the Middle States have been in the habit of cutting the stalks and stacking them in heaps. The corn is still full of moisture and the ears point upwards. By so treating the stalks they make better fodder for stock, but the grain is very apt to undergo fermentative changes, and when husked it is not perfectly dry. It was said at the conference that damaged corn was usually ground into meal when the corn could not be sold in bulk. It was not uncommon for the price of a bushel of corn meal to be less than that of a bushel of corn. The reason is obvious. It was shown by the foreigners and by some of our countrymen that the importation of corn was followed in a year or two by outbreaks of pellagra. In Yucatan, we were told, the native corn crop failed some years ago and American corn was imported. There followed an epidemic of pellagra. The native crop for the next few years was sufficient to supply the demand and there were no further pellagra cases. Again the corn crop failed, corn was imported from the United States, and again pellagra broke out in epidemic form. Certainly this is very suggestive.

There was an attempt made to connect the disease known in horses as "blind staggers" and pellagra in man. A stock-raiser reported having fed his horses and mules on corn which he had "cured" by cutting the stalks while they were still green. This he had never done before. There had never been "blind staggers" among his stock. Following the feeding of this corn in which the kernels were found to be black, there broke out among his stock virulent "blind staggers." As soon as inspection of the corn revealed its damaged condition, feeding was stopped,

and oats was substituted. The disease was arrested, but a new stable man, against orders, fed some of the damaged corn, and again the disease developed. The cause of "blind staggers" is, so far as the writer knows, not known. This proves nothing but may lead to important investigations.

No specific pathology of pellagra has been described. H. F. Harris, of Atlanta, found minute changes in certain of the brain cells, notably in the Betz cells and in the Purkinje cells. Many autopsies have revealed extensive degeneration of the posterior columns of the cord, especially marked in the cervical region. These resemble the degenerations seen in tabes. Ataxia is not necessarily associated with these cord lesions, and the knee jerks are almost always increased in advanced cases. In one case, where the posterior roots were examined, no changes were discovered. Some have found degenerated areas in the lateral columns.

Siler and Nichols reported from the Peoria Asylum that about 50 per cent. of the inmates had amebæ in the stools. Of those suffering from pellagra, about 80 per cent. had amebæ. Dysentery was frequent. Many cases of extensive intestinal ulceration were found at autopsy. Examination of the water supply showed no amebæ, but in the tank on the grounds and in the pipes there were myriads of amebæ. They considered that the presence of amebic dysentery predisposes to the development of pellagra. The reason why pellagrous patients were more infected with amebæ, was possibly on account of the dementia and resulting untidy habits of such persons.

Bass, of New Orleans, reported a series of cases in which the Wassermann reaction was tried, using lecithin as antigen. His results seemed to show that there were specific antibodies in the blood of pellagrins. He was cautious in the interpretation of his results and promised to report further work. In 30 cases Howard Fox, of New York, did not succeed in getting the Wassermann reaction, using syphilitic material as antigen. These results do not conflict, as Bass used a lipoid substance as antigen, while Fox used material from inherited syphilis. Many competent pathologists are now actively investigating the subject, and it is hoped that by next year some characteristic lesions will be found.

No age seems to be exempt from this disease. There were reports of cases occurring in children from three years of age to puberty. Many fatal cases in children were reported. As the great majority of cases have been found in asylums for the insane, most of the cases on record have occurred in those in or past middle life. Women seem to be more prone to the disease than men. The colored females are especially attacked. The mortality is high in the advanced cases. The disease is essentially chronic.

There is a seemingly definite triad of symptoms coming on in the order named—diarrhœa, dermatitis, dementia. The initial symptoms are usually diarrhea and stomatitis, accompanied, at times, by distinct mental hebetude and apathy. The tongue is usually red, especially at the edges,

and the papillæ stand out as bright dots—the so-called stippled tongue. The attacks occur usually in the fall or spring. The first lesion on the skin occurs on the backs of the hands and wrists and looks much like sunburn. There is sharp demarcation from the healthy skin of the forearm. The elbows are often roughened and a triangular patch of discoloration ending in a point, and extending from the elbow down the extensor surface of the arm for several inches, is characteristic. The early skin lesions may heal perfectly leaving the skin as soft as before, but as a rule, there is a residual roughness and dryness of the parts. The bronzing of the body was a point to which attention was called. The lesions are symmetrical. Later, lesions occur on the dorsal surfaces of the feet, on the back of the neck, at the elbows, on the forehead and cheeks. Frequently ulceration occurs which may be extensive and even go on to gangrene. By this time the mental state of the patient has changed. No characteristic form of mental deterioration is present. Some of the Richmond men called attention to weakness of the extensor muscles of the thumbs, causing a position of the thumbs which they designated, thumb drop. The patients die of exhaustion, or a terminal infection carries them off.

It is not difficult, as a rule, to diagnose a moderately well-marked case. The history of periodical attacks of diarrhœa, the sunburn-like eruption on the hands or hands and feet, and the curious dry, rough, and discolored skin suffice to render the diagnosis sure. First attacks may be difficult to recognize, but pellagra should be suspected when there are diarrhœa, stomatitis, and symmetrical skin lesions. Pustular syphilids, eczema, and burns must be excluded. The symmetrical character of the lesions is exceedingly important.

The opinion of the conference was that pellagra is not an infectious or communicable disease. Stress was laid on prophylaxis as the most important means of combating the spread of the disease. This opinion was formulated in the following series of resolutions:

Resolved, That this conference recognizes the wide-spread existence of pellagra in the United States, and urges upon the national government the necessity of bringing its powerful resources to bear upon the vital questions of its cause, prevention and control.

“Resolved, That while sound corn is in no way connected with pellagra, evidences of the relation between the use of spoiled corn and the prevalence of pellagra seem so apparent that we advise continued and systematic study of the subject, and, in the meantime, we commend to corn growers the great importance of fully maturing corn upon the stalk before cutting the same.

“Resolved, That the work of this conference be brought to the attention of the various state and territorial boards of health, and they severally be urged to specially investigate the disease, particularly as regards its prevalence, and that they also see that proper inspection of corn products sold in the various states be had.”

It will be noted that the chief point in prophylaxis centered around the production of sound corn. No blame was attached to good corn. This is important to note. It is only spoiled corn which is to be feared.

Lowered vitality, due to bad hygienic surroundings, poor food, and infection with hook-worm and amebæ, predispose to the development of pellagra. However, cases were reported among people in good circumstances. It was suggested that whiskey made from corn might be a factor in producing the disease. It must be borne in mind that no cereal is so widely consumed for food as corn.

Treatment of mild cases consists in withdrawing corn and corn products from the diet, in giving a full, nourishing diet, and in improving the hygienic conditions. Very little drugging is used. Symptomatic treatment for the anemia is recommended. The one drug which was universally recommended was arsenic, either in the form of Fowler's solution or atoxyl. In severe cases atoxyl was administered by injection, gr. $\frac{1}{2}$ to $\frac{2}{3}$ twice daily, three times a week. Cole and Winthrop, of Mobile, Ala., reported nine cases in which transfusion of blood was performed. The donors were healthy persons or those supposed to have recovered from attacks of pellagra. The report was interesting but not at all convincing. It was stated by some that in hopeless cases, such as were reported, it might be used as a last resource. Attention was also called to the report of two Italians, published thirty years ago, telling of the treatment of four cases with blood serum of cured pellagrins. One case died, three recovered.

At the last session of the conference a permanent organization was formed. Dr. J. W. Babcock, Superintendent of the South Carolina State Hospital for the Insane, called by the conference "the father of the movement for the study and control of pellagra in America," was elected president. The first meeting of the organized association will be held next June at Peoria, Ill. It is hoped by that time we shall have learned something definite about this most important disease.

INDISCREET CHAPTERS IN HISTORY.‡
(Les Indiscrétions de l'histoire.)

By DOCTEUR CABANES.

Translated by Dr. Philip Skrainka.

CHAPTER II.
OF WHAT DID LUTHER DIE?

How many contradictory reports, how many futile hypotheses, how many rumors, have circulated since the death of Luther! In truth, the manifold versions which have been advanced in regard to his last moments only increase the difficulty of trying to solve the problem which dominates this chapter, and which may be formulated into the question, What disease caused the death of the great Reformer?

Recent researches* which have enlightened us as to Martin Luther's constitution have made plain that his diathesis was of the arthritic type,** lithic, hemorrhoidal, and gouty. The crises of nephritic colic alternated with those of podagra. "I moan with fever which is the malady of the Germans," he wrote one day, "just as gout, it is said, is the English disease." The descriptions of his own illnesses show him to have been a consummate observer, possessed of animation, and gifted with picturesque vigor of language but seldom equalled. Here are some of his candid words which are quite innocent of all periphrasis: "When I went to stool, the part of the intestine which passed through the anus had the size of a nut. Afterwards it remained as a projection resembling a grain of hemp-seed, which itched and inconvenienced me much more when the stools were soft. When I passed clotted blood I felt more at ease, and was in a better frame of mind. The act of defecation was become a joy to me since it increased the flow of blood so well that the pleasure derived from this sensation induced me to resort to the latrine many times during the day. When I pressed the parts with the finger, they itched in an agreeable manner, and then the blood would flow."† So excessive was Luther's constipation that it amounted to a continual torment, an obsession that weighed upon him; and he did not hesitate to make

*These have been summed up by Dr. Paul Cornet in an article in *Le Progrès médical* of March 6, 1909; and even prior to this date Dr. Pergens published a similar article in *Janus* for August, 1908.

**Authorities are not at one as regards Luther's hereditary antecedents, but they are agreed that he had a wretched constitution. His first known malady was a severe attack of fever without sequelæ when he was fourteen. These febrile accesses recurred five years later. From 1508 to 1521 all information is lacking. Lithiasis declared itself in 1521; after many attacks calculi formed; and in 1526 one of these calculi was found to be very large. At the end of 1523 Luther had an attack of syncope.

†Letter to Julius Jonas (January 6, 1528).

‡Copyrighted, 1909.

his friends the recipients of confidences in regard to this prosaic chapter in his private life.

In 1522 Luther, then 39 years of age, wrote to Melancthon: "The Almighty has seen fit to strike me in the back; my stools, on account of being very hard, compel me to make such fearful efforts that the sweat rolls down my face. Yesterday I went to stool after four days; the result was I did not sleep all night." The pills which Luther swallowed had only a passing effect, the constipation lasting at times from five to six days. His temper was greatly affected by this. Periods of prostration alternated with crises of excitation; and though we are not in a position to assert that a chronic intestinal paresis was wholly responsible for these manifestations, we nevertheless are justified in affirming that it had some influence on his character. He who enjoys but imperfectly "the real happiness of life," to quote Montaigne, ought surely to command our pity.

As earnest investigators we should search for an explanation of the attacks of vertigo and syncope, and of those aural noises of which Luther so often complained, and which he attributed to the machinations of the devil whom he believed in possession of his body and soul.

* * * * *

Above all, the hallucinations of sight and hearing in Luther's case demand considerable attention, since they played a prominent and active part. As Moreau de Tours has said, "the hallucinations of Luther were not less numerous and not less authentic than those of Loyola." Various authors have asserted that his numerous conferences with the devil were a sort of myth, imagined by Luther himself, but the facts in the case are against this opinion, for his writings attest to their authenticity. In his treatise, "*De missa privata*," in which is recorded his vision of the devil and his conference with the Evil Spirit, after exalting the prowess which Satan possesses and mentioning Satan's impatience of lengthy discussions, Luther says: "Now I have the explanation why it happens that men are found dead in bed; it is Satan who twists their necks and kills them." The records also speak of his self-imposed tasks, "his prayers, his vigils, and all sorts of austerities which were made more severe by excessive fasting, and finally caused such hebetude that he was incapable of listening to reason or working, for weeks." His sexual abstinence, conjoined, as it was, with these mortifications, has been mentioned as the cause of "periods of excitation which, thanks to a strong volition, the virile Preacher victoriously surmounted until his marriage." As for his attacks of vertigo, let us hearken to Luther himself, since he has left us a very good description, albeit his interpretation is not as scientific as we would wish.

Luther, at twenty-seven, suffered from buzzing in the ears, and as he was ignorant of physical science, he attributed the phenomenon to the devil. He thus expresses himself: "The aches in my teeth and ears are

worse than the pest. I am tortured by a blowing and buzzing in my ears as if wind were rushing through my head. The devil is within me for some purpose. You cannot conceive how horrible is this vertigo; day after day I find it impossible even to read a letter, or two or three lines of the Psalms. At the end of three or four words the blowing recommences and I almost fall from my chair." This happened in 1510. In 1530 Luther wrote: "When I attempt to work, my head is filled with all sorts of noises, with buzzing, with whistling, with peals of thunder; and if I do not quit my work at once, I faint. These last three days I have not been able to read my letters. I have had another visit from the devil. My malady is the result of the usual feebleness of old age, constant mental tension, and above all, of the castigations of Satan. No medicine in the world can cure my disease."

These noises in his head and ears were so misleading that when, in 1521, a box of nuts had been placed in his chamber, he thought that the devil was responsible for shaking them. "When I had blown out the light and got into bed," says Luther, "it seemed to me that the nuts began to move, and not only did they leap over each other but they knocked against each other, and before long they advanced towards me, and the noise was next my bed. Nevertheless, I took no notice of their unseemly behavior but slept on. However, from time to time, I was awakened by a great noise on the staircase, as if someone were throwing hundreds of tons of nuts in quick succession down the steps. I got up and cried out: 'Is that you, devil? If so I commend my soul to God.' Then I went back to bed and slept. Once, at Wittenberg, I distinctly heard the devil make a noise; he made the noise thrice in the garret and it seemed as if he were dragging something heavy along the floor. The noise continuing I left my books and retired for the night." One day, during a severe storm, Luther exclaimed: "It is the devil who is doing this. Ah! How the devil blows!" On another occasion he wrote: "Idiots and cripples, the blind and the deaf, are the persons in whom the devil elects to dwell. All the doctors who essay to cure these infirmities, in the hope of proving their natural causes, are ignorant fools. They know neither the devil nor his works."*

Some authorities have attempted to see in these diabolic manifestations the symptoms of Ménière's vertigo;** while others have proposed an altogether different explanation. As regards the diagnosis of Ménière's vertigo, we must contend it is a bit premature when applied to this period of his life, but is quite applicable to a later epoch when the noises became more and more annoying, first in the left ear and then in both, and when, as happened in 1541, the aural discharges were more or less bloody. If there was an otitis externa, a theory advanced by a certain specialist,† was it not really a sub-acute otitis, supervening

*Journal des Connaissances médicales, 20 oct. 1887.

**See Archives de neurologie and The Medical Record for 1887.

†Küchenmeister. Dr. Martin Luther's krankengeschichte. Leipzig, 1881.

in consequence of a chronic catarrh of the Eustachian tubes with complications of perforations of both tympanic membranes? The latter opinion* fits in better with the clinical picture of the case as revealed to us in the autobiography of Luther.

The question which is quite important to ask is, Was gout the underlying cause of his aural affection? Authorities are undecided on this point. Another matter that might engage our passing notice, is the fact that he was emmetropic and wore weak convex glasses; and that one eye was cataractous. That he had an ulcer of the leg, attacks of sciatica, and suffered from rheumatism are matters to be expected in one of an arthritic diathesis. After due attention to all his chronic ailments, our surmise is that death was caused by heart failure consequent upon arteriosclerosis. Even admitting this to be only a hypothesis** we should not forget that it might be weakened by the facts in the case.

* * * * * * * * *

Luther's end was sudden and unexpected; but the sort of life he had led would warrant such a demise. Surely we are not attacking his memory when we note his intemperance. Does he not himself indulge in self-praise for "eating like a Bohemian and drinking like a German?" Wine was a luxury, but the drinking of beer was a daily habit. "I conquer the world by drinking my pot of beer," he never tired of repeating. Authorities who would feign make Luther out to have been abstemious, quote without fail the testimony of Melancthon, who asserts that he saw Luther "when he was in good health" pass four entire days without either eating or drinking. But they forget to add the most important part of this statement, to the effect that "on the contrary, he [Luther] was not ashamed to drink a good draught every now and then; a habit he excused by saying, 'Here is the wherewithal to thwart the devil when one wants to continue joyous.'" A singular regimen, indeed, and one that could only aggravate his many ailments.

The year preceding his death, according to his biographers,† was characterized by his "suffering without cessation from violent pains in the head, from stone; and his legs were swollen and his eyesight was diminished." Despite the miserable state of his health, this old cacoehymic undertook a voyage that was about the most laborious one can imagine. We are now speaking of the month of January, when the winter was at its height and the cold was excessive. To Count Albert von Mansfeld, who had sent for Luther, hoping through his arbitration to settle a family dispute, the Elector John Frederick, his suzerain, had said: "Dr. Martin Luther is old and worn out; you would do better to spare him." And Luther himself, writing to a friend, said: "I am

*W. Ebstein. *Dr. Martin Luther's krankheiten und deren Einfluss auf seinen Körperlichen und geistigen Zustand.* Stuttgart, 1907.

**See *Le Progrès médical*, loc. cit.

†Luther, *sa vie et son œuvre*, par Félix Kuhn, t. III. (Neuchâtel et Genève, 1884), p. 359.

aged, exhausted, languid, and fatigued, and I see only out of one eye. I had hoped that being so near death I would enjoy the repose which I have so well merited, but I am being deluged with writings, discourses, and all sorts of business, as if I had never worked or written or lectured in my life."

On January 23, 1546, Luther started on his journey and arrived at Halle two days later. An inundation of the river Saale detained him there three days. He consoled himself by drinking "the good Torgau beer and the good Rhine wine." On January 29, he departed; and although the river was high and turbulent he made it a point to leave his bark, and bathe. At the frontier of Mansfeld, an escort of honor, consisting of one hundred and thirteen cavaliers, awaited him to conduct him to the lords of the country-side, who were to be his hosts. At some distance from Eisleben, he expressed a desire to walk. The coach was stopped and Luther walked until he perspired freely. When he got back into the coach he was seized with a chill; this was followed by vertigo and labored respiration; then he became very weak. Arriving at Eisleben he immediately went to bed, was rubbed down and placed in warm linens. The next day he was better.* But the warning he had received was without avail. Some days later he sent the following message to his wife: "We live very well here; the Council sends me for each repast a demi-measure of Rhenish wine. I always drink a little of it with a companion. The wine here is good, and although the beer of Naumburg is delicious, I have an idea the resin it contains is responsible for the phlegm in my stomach."

A letter which Luther wrote, four days before his death, to Melancthon makes known to us his desperate condition at this date. From day to day his sufferings increasing, he became more and more dissatisfied, and he hastened to arrange the differences which divided the Counts of Mansfeld. His attacks of vertigo and headache recurred; he attributed them to the closing of a cauterized wound in his left leg, which had cicatrized on account of not having been cauterized for some time. On Sunday he suffered intensely and on Wednesday his strength was nigh spent. In the evening before dinner he complained of an oppressive sensation in his chest and asked to be rubbed with hot cloths. He ate moderately and went to bed sooner than was his habit. Hardly had he entered his room than he felt anew the oppression experienced in the early part of the evening. One of the watchers who sat at his bedside suggested he should take unicorn's horn, assuring him that there was no remedy more efficacious in like ailments. At once, measures were taken to procure the precious drug; and after being grated it was administered in a spoonful of wine. In the middle of the night he was seized with difficult breathing. "O, God," he sighed, "I am so ill; I am in agony; I feel I am going to die." Despite frictions with all sorts of balms and

*Félix Kuhn. *op. cit.*, t. III., ch. VI.

essences brought to the sickroom by the Countess of Mansfeld, the coldness of the body increased, the breathing became barely perceptible and the flame of life was almost extinguished. "Then his breathing indicated gentle sleep and only a sigh, in which he seemed to render his spirit to his Maker, disturbed his last rest."

* * * * *

It has been said that this version of the last moments of the great Reformer, which we have condensed into a few lines, was inspired by his entourage in the hope that so favorable an account would be a protest against the many rumors put into circulation after his death, and to which we will revert later on. Here it would be well to mention the deposition of an eyewitness, who was a Catholic, and on account of whose religion it would be foolhardy to make accusation of any partiality for Luther. This witness was an apothecary, by the name of Jean Landau, and he had been called to the bedside February 18, 1546, at three in the morning. We owe our knowledge of this important matter to an adversary of Luther, who claimed he got the deposition from a burger of Mansfeld whose name he could not divulge.* But it is imbued with so much sincerity that we cannot doubt its authenticity.** It thus runs: "Wednesday, February 17, Luther showed again his joyous spirit at table; he made everybody laugh by his pleasantries and his gay remarks. But towards eight o'clock he did not feel so well. After midnight two physicians were called in haste: a doctor of medicine and a magister. On their arrival the patient's pulse beat no longer. This is why, towards three o'clock, an apothecary was awakened and received the order to prepare a clyster and take it to Luther. After arriving he prepared and warmed the clyster according to the physicians' directions, and, whilst doing this, thought he detected life in Luther. But upon turning the patient to give the clyster, he saw that he was dead. Turning to the doctors the apothecary said: 'He is dead; what is the need of the injection?' Count Albert and some scientific men were of a like opinion. But the physicians replied: 'What does it matter? Give the clyster so as to revive him if perchance there is a breath of life remaining.' On inserting the canula the apothecary noticed flatulence and borborygmus, because the body was filled with liquids on account of excesses at the table. In fact, Luther's pantry was always sumptuously provisioned and when dining with his hosts there had always been an abundance of native and foreign wines. It was reported that Luther drank a 'setier'† of these wines at each repast. Directly the apothecary injected the clyster, the solution which had been so magnificently prepared was spread over the bed. The apothecary then said to the physicians: 'The clyster will

*See *La Chronique médicale* of February 15, 1900.

**This is the translation which Dr. Emile Laurent reproduced in *La Chronique* from the thesis of G. Claudin entitled "*La Mort de Luther*." Noisy-le-Sec: Debarle, 1895 (Thesis of the Protestant Theological Faculty).

†An obsolete measure. (TRANS.)

not remain.' They answered: 'That will suffice.' The physicians got together and discussed the cause of death. The doctor of medicine said it was due to an attack of apoplexy. Were not the lips convulsed and the right side all black (*visa est enim tortura oris, et dextrum latus totum infuscatum*)? But the magister thought that a man so saintly could not die from a stroke administered by the hand of God; but had succumbed following an attack of suffocation (*dicebat fuisse catharum suffocativum, et per viam suffocationis mortem intrasse*)."

To determine exactly the nature of Luther's last malady from these vague indications is surely a difficult task. And what is most annoying is the fact that our chances of being better informed by means of other authorities are indeed quite the opposite of encouraging.

Dr. Bruck, Chancellor of the Elector of Saxony, writing to the Elector, stated that Philip Melanchthon had spoken to him of "an oppression of the chest," that Luther had cured the year before by using the bark of pomegranate. And this same Melanchthon, in a lecture delivered at Wittenberg the day after Luther's death, advanced the opinion that his master's end had been due to repeated attacks of his chronic disease, "oppression from the humors at the orifice of the ventricle" (*non apoplexia, non asthmate extinctus est * . * sed humore in orificio ventriculi versus pectus impulso*). We wonder what was understood, in Melanchthon's time, by obstruction of the ventricle through the humors!

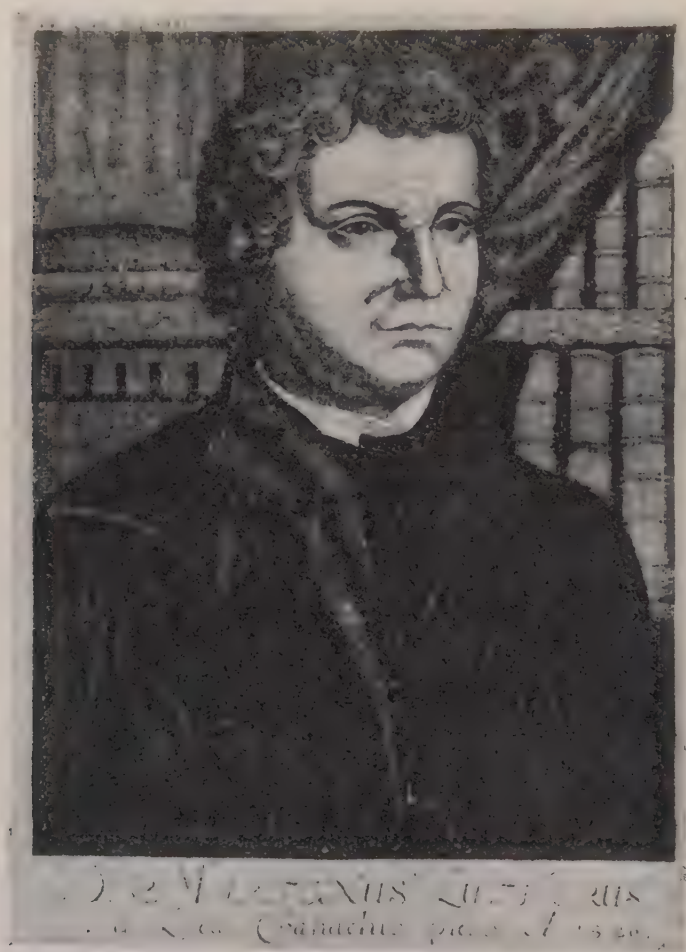
By the term "ventricle" the stomach is understood. Therefore did Luther have acute or chronic indigestion? According to the official report, from which we have already quoted, Luther ate but sparingly during his last repast; on the other hand, according to other witnesses, he dined copiously. Face to face with these contradictions, how is one to arrive at a just conclusion?

The torsion of the mouth, if it was really present, would confirm the idea that Luther had a cerebral hemorrhage with apoplexy; but though we might be inclined to this opinion we should pause, nevertheless, long enough to note another hypothesis, albeit suggested by a document which has small claim to truth. This hypothesis emanated, in fact, from Luther's servant, who was a convert to Catholicism and who, while under the influence of his conversion, wrote the extraordinary article which is printed below. But what should not be overlooked is the fact that the servant's account did not appear until forty-six years after Luther's death.

* * * * *

In 1592, the oratorian, Th. Bozio, published at Rome a work (*De signis Ecclesiæ*, lib. XXIII., c. 3) in which he related that a former domestic of Luther's had told him that Luther had hanged himself on his bed. In a book published at Antwerp in 1606 (*Præscriptiones adversus hæreses*) the Franciscan monk, Sedulius, printed for the first time the complete deposition of the domestic already alluded to by Th. Bozio.

The veracity of the domestic's document goes unquestioned since it was written by one who was deeply religious. In 1895, G. Claudin reproduced it with a translation in his thesis, "La Mort de Luther." The following is Claudin's translation;* "Your religious solicitations prompt me to brave the indignation of men and the fear of offending them by being a witness to the truth; and my respect for the Supreme Being and all the Saints goads me on to still greater action....For the glory



of Christ and the edification of the Catholic world I shall lay bare to the light of day all that I have myself seen, and announce the same to the princes assembled at Eisleben. I shall not indulge in hatred nor shall my object be the acquiring of the good opinion of anyone. Here is what occurred: It so happened that on a certain day Martin Luther was entertained at Eisleben by some of the most illustrious lords in Germany. His weakness for drink overcame him, and it was necessary for us to lead him from the room in a state of drunkenness, and put him

*Chronique méd., 1900, p. 99.

to bed. After wishing him good-night we went to our room with no thought of the possibility of anything untoward occurring to Luther, and we soon slept peacefully. Next day when we entered the room to aid our master to dress, as was our custom, we found him, O horrors, him, our Master Martin, hanging from his bed and horribly strangled. This awful spectacle struck us with terror, but without hesitating for long we went in all haste to notify the princes, his convivial companions of the night before, of the abominable end of Luther. They were terrified as much as we, and conjured us to keep silence lest the news would get abroad, at the same time making all sorts of promises if we would obey. They told us to free the horrible corpse at once, place it upon the bed, and then go among the people and circulate the report that my Master Martin had died suddenly."

The account of the suicide,—an event that cannot be supported by any occurrence in Luther's life,—appears on its face to be surcharged with untruth. To suppose that so joyous an epicurean would end his life in this miserable fashion; is certainly a pleasantry that appeals strongly to our risibles. But, on the other hand, if we wish to explain his end,* though it was an untimely one, in true scientific fashion, so as to avoid criticism, it will be necessary to recall Luther's pathological condition during many years of his life. We feel that this is the only way out of all difficulties, and also the only method to pursue to arrive at some degree of clarity in a controversy that has not always been free from religious passion.

The great disturbance in Luther's chest and the oppressions of which so much has been written, can be attributed only to one of two diseases, angina pectoris or pneumonia. Upon studying Luther's disease, we fail to come across any mention that bears resemblance to the *coup de griffe* of angina pectoris, "the painful paroxysmal affliction which occurs all of a sudden without any appreciable cause.** Without doubt, angina pectoris is often a concomitant of gout or rheumatism, and we know Luther was both gouty and rheumatic; but the symptomatology of this cardiac neurosis is not found in the picture which we have reconstructed in regard to his last illness. The details of his last voyage, and the chill which evidenced itself some days before the final crisis, and from which he never completely recovered, strengthen our belief that Luther succumbed very prosaically to pneumonia. Moreover, this disease, when it occurs in the old, is generally insidious, "the chilliness is insignificant and the pain in the side may pass unperceived (G. Dieulafoy)."

Of course, in the absence of data that are trustworthy, we have but a slender foundation to build on; and though we are inclined to think that our opinion is quite near the truth, we feel that so little has been vouchsafed us in the way of correct clinical notes, that even our enthusiasm will not allow us to admit that our theory is anything better than a strong likelihood.

*La Fin de Luther, par le docteur Majunke; translated from the German by the Abbé Schlincker. Paris: Hte Walzer, 1893, p. 15.

**Manuel de pathologie interne, par G. Dieulafoy (Paris, 1885), t. I., 349.

MEDICAL AND SURGICAL PROGRESS.

PELLAGRA IN THE UNITED STATES.

A REVIEW OF RECENT LITERATURE.

By JESSE S. MYER, M. D.

1. NOTE ON PELLAGRA IN MARYLAND.—Thayer (*Johns Hopkins Bulletin*, July, 1909).
2. THE ETIOLOGY OF PELLAGRA.—Lavinder (*New York Med. Jour.*, July 10, 1909).
3. NOTES ON PROGNOSIS AND TREATMENT OF PELLAGRA.—Lavinder (*Public Health Reports*, June 18, 1909).
4. PUBLIC HEALTH REPORTS, September 17, October 22, October 29, 1909.
5. PELLAGRA, ANCIENT AND MODERN.—King (*Jour. A. M. A.*, November 6, 1909).
6. PELLAGRA: ITS OCCURRENCE IN COOK COUNTY INSTITUTIONS.—Pollack (*Jour. A. M. A.*, October 2, 1909).
7. THE TRANSFUSION OF BLOOD AS A THERAPEUTIC AGENT IN A CASE OF PELLAGRA.—Cole.
8. PELLAGRA IN VIRGINIA.—Hewitt (*Jour. A. M. A.*, October 2, 1909).
9. PELLAGRA IN THE UNITED STATES.—Wood (*Jour. A. M. A.*, July 24, 1909).
10. PELLAGRA, WITH REPORTS OF NINE CASES.—Bondurant (*Med. Record*, August 21, 1909).
11. THE PREVALENCE OF PELLAGRA IN THE UNITED STATES.—Lavinder-Williams-Babcock (*Public Health Reports*, June 18, 1909).
12. CONFERENCE ON PELLAGRA, COLUMBIA, S. C., November 3-4, 1909 (*Jour. A. M. A.*, November 13, 1909).
13. LITERATURE ON PELLAGRA (*Jour. A. M. A.*, November 13, 1909, p. 1657).

There is perhaps no subject which is absorbing the attention of American physicians at the present time, and especially those of the South, more than is pellagra, a disease which has in all probability existed in America in considerable numbers for many years. The weekly reports of new cases are coming in, especially from various sections of the South where their existence had not even been suspected. To the medical profession its great interest at this time lies not alone in the discovery of new cases, but in the exact determination of its cause. While the cause is considered definitely settled by some, it is openly

questioned by many others. The first authentic accounts of the disease came from Spain in 1762, when Gaspar Casal described it under the name of "mal de rosa." The ancient and modern history of the disease has been thoroughly entered into by Thayer, Wood, King, and others, and is an exceedingly interesting chapter in present day medicine. The first mention of the disease in this country was made by Harris, of Atlanta, in 1902 (*Am. Med.*, 1902, IV. 3). In 1907 Searcy (*Jl. A. M. A.*, 1903, XII. 3), reported an epidemic of acute pellagra in the insane asylum at Mt. Vernon, Ala. In October, 1908, a conference was called by the State Board of Health of South Carolina, the papers read at this meeting being published in pamphlet form (Conference on Pellagra, Columbia, S. C., 1909). Last month a similar Congress was held at Columbia, S. C., in which a large number of most interesting papers were read and discussed by those both in this country and from abroad who are interested in the subject. Here pellagra was discussed in all of its phases,—its clinical aspects, its pathology, its etiology, its skin manifestations, its importance as a national health problem, the hematology, relation to insanity and nervous diseases, the Wassermann reaction, the treatment, and from many other standpoints.

Thayer, in a recent article, goes into a rather extended discussion of the etiology, symptomatology and pathology of the disease. It is characterized by symptoms of three main classes: (1) those related to the alimentary tract; (2) the cutaneous manifestations; (3) the nervous and mental symptoms. One of its most characteristic symptoms is stomatitis, which may be extremely severe. A peculiar exfoliating, pigmentary dermatitis occurs on the parts of the body exposed to the sun's rays, and while he believes that the sun has a decided influence in causing the eruption to appear on the hands and face and the dorsum of the feet in those who go barefooted, he quotes Neusser to show that, in children who go about almost naked, the distribution is the same. Vertigo is common. The nervous symptoms are mainly referable to lesions in the cord, as sclerotic changes are found, especially in the lateral columns of the dorsal cord. Among the more prominent mental symptoms are confusion, feeling of anxiety, and disorientation as to time and place. The patient looks dull and serious and in the later stages profound dementia occurs. Two forms of the disease are recognized, (1) an acute typhoidal and (2) a milder chronic, or recurrent form. The first runs its course in a few weeks with delirium, fever, and diarrhœa. The second form may last for as many as 25 years. The exacerbation occurs in the spring and fall. In the interim the patient may seem entirely well. Though the generally accepted theory is that the disease comes from eating bad or mouldy Indian corn, there are those who dispute this theory.

Lavinder maintains that the etiology of pellagra, in a definite scientific sense, is unknown. Still, different students of the disease hold profound convictions on the subject. The predominant idea, one which exists even in the earliest literature, is, that there is some relation between the disease and the use of Indian corn. Those who adhere to this view in its various forms and modifications have been called Zeists; the anti-zeists deny any direct or indirect influence from Indian corn. Ballardini early claimed that the disease was due not to healthy maize, but to that which had been attacked by a certain bacterial growth (*sporosorium maydis*). In support of the Zeists it has been noted, (1) that only in countries where maize-eating is common is pellagra present; (2) that it is most common where maize is an important article of diet of the poor, although many such communities have no pellagra; (3) that in countries

where maize is not used there is no pellagra however close they may be to pellagrous districts; (4) that the ingestion of maize may cause pellagra in any district where it has been unknown and its removal may benefit those already suffering from the disease. The author then discusses the modifications of the maize theory: (1) whether the disease be due to the maize itself lacking in nutritional factors; (2) whether good maize is toxic; (3) whether the toxin is produced by the action of a sporophyte on the grain (this is the most popular idea); (4) whether an autointoxication, due to bacterial or digestive fermentation of good grain or bad grain in itself not toxic; (5) whether pellagra is a specific infection by some mould or bacterium. Tizzoni, in a recent paper, claims to have isolated organisms from the blood and stools of patients as well as from the maize. The "anti-zeists" base their views on the fact that pellagra is confined to so small a part of the maize-consuming communities, and that so many cases are reported in which no history of the use of maize in any form can be elicited. Sambon in 1905 suggested that the disease is due to a protozoa. Much of the confusion seems to lie in the variety of contradictory experimental observations. The beneficial effects of arsenic, claimed by some, lends strength to the protozoal theory, but this theory is scarcely more than a suggestion as yet.

The prevalence and distribution of cases in the United States has been carefully considered by Lavinder, Williams, Babcock and others, and interesting facts were brought out. Forty-five years ago two cases of probable pellagra, with mental symptoms, were reported. Exclusive of two cases reported in 1902, the disease has, since 1864 until 1906-7, disappeared, been overlooked, or called by another name. A number of cases were recognized and reported in 1907 from Alabama and South Carolina asylums. Recently letters of inquiry were sent to the superintendents of State hospitals for the insane in the United States with the result that there are about 1000 cases scattered through thirteen States, more than half of them having been reported from asylums and similar institutions. Lavinder believes 1500 to be a conservative estimate for the number of cases in the Southern States since 1906. In the Peoria State Hospital for the Insane, caring for 2200 patients, 40 to 50 well-marked cases were found. It has probably been in the institutions for eight years, according to the superintendent. Cases are reported from Beaufort, S. C.; Georgetown, S. C.; Jacksonville, Fla.; Key West, Fla.; Wilmington, N. C.; New Orleans, Camden, N. J., and 21 cases from various parts of Texas. The Board of Health of New Orleans reports four deaths in September. Maryland reports the first death in that State of a lifelong resident in the State. Pollack presents fourteen cases from Cook county institutions, five native born; of the foreign born, one had been in the country six months, the others eight to thirty years. The course in these later cases (those treated with Fowler's solution) has not been so severe and the results are somewhat promising. Hewitt reports a case of pellagra of the milder type in a patient aged 56 years, who had spent all his life in Virginia, with the exception of three years in Nebraska. He had eaten, of late, more and more corn meal, which had never agreed well with him and therefore he had avoided eating it until his financial condition made it a necessity. His father and two brothers were similarly affected by the diet and avoided it. So far as the patient could recall they presented no symptoms of pellagra. Bondurant describes nine cases in his practice, occurring from August 1, 1907, to May 1, 1909. Being a neurologist, of course the nervous symptoms are well developed in the cases which came to him. A neurotic

heredity was not a factor in his cases. He believes the nervous symptoms are those of a toxemic delirium, with eventual progressive degeneration of the cortical cells. In all of the cases there was a history of the liberal use of corn meal for food. Bondurant does not think that in the eleven years of his practice in Mobile he had seen a case of pellagra prior to August 1, 1907, and believes that the disease is comparatively new in the South.

Wood, in his own experiences, shows that the disease has probably gone unrecognized by those who have had an opportunity to observe cases. In 1907, he reported a series of cases under the title "Symmetrical Gangrene of the Skin," which he failed to recognize as pellagra. Both he and Thayer call attention to the fact that, while in Italy the disease is confined to the poor, in this country there seems to be no class preferences. Wood is inclined to believe in the existence of a family tendency or predisposition of some kind. He believes he has isolated, from the blood of a pellagrin, the same organism as Tizzoni and others, a very motile bacillus, which he is inclined to think is the cause of the disease. Thayer gives a detailed report of two cases occurring in Maryland, the first reported in that State, one in a woman in well-to-do circumstances, the other in a driver who gave no history of partaking of any corn. In the first case marked benefit was obtained from administration of the thyroid gland; this benefit was only temporary and the symptoms soon reappeared when the thyroid was discontinued. Thayer suggests that hypothyroidism may produce an unusual susceptibility to this disease.

Lavinder compares pellagra and tuberculosis in their course and prognosis;—the earlier the diagnosis is made in their course, and treatment given, the better the prognosis. Most authors seem to believe that the disease can be entirely cured. Lombroso recommends a liberal diet, including meats; also cold baths and douches where they are well borne, and arsenic in the form of Fowler's solution, 5 to 30 drops, carefully watching for appearances of poisoning. Others have used the newer arsenic preparations,—atoxyl, soamin,—and speak highly of them. The American physicians have not as a rule had very encouraging results from these. Cole recites an interesting experience in which he employed the transfusion of blood as a therapeutic agent in a case of pellagra. The donor was a patient recovered from the disease, the recipient was a case in such extreme condition that an experienced observer of the disease had pronounced recovery impossible. She was a colored female, age 35, extreme asthenia, deglutition and phonation barely possible; symptoms of three weeks duration. Crile method of transfusion was used, time of flow, 20 minutes. In twenty-four hours the patient showed marked improvement, mentally and otherwise; one week later, with steady improvement, the patient was walking about, and in a short time was in entirely normal health.

"EXPRESSION OF THE LENS IN ITS CAPSULE."

A REVIEW OF SOME RECENT AMERICAN LITERATURE.

By JOHN GREEN, JR., M. D.

1. THE EXPRESSION OF CATARACT IN ITS CAPSULE (WITH REPORT OF FORTY OPERATIONS).—Wuerdemann (*Trans. Sec. on Ophthalmology, American Medical Association, 1909*).
2. EXPERIENCE IN THE EXPRESSION OF CATARACTS IN THE CAPSULE BY THE SMITH METHOD.—Greene (*Trans. Sec. on Ophthalmology, American Med. Assn., 1909*).

The operation of expression of the lens in its capsule—the so-called Smith Indian Operation—is a subject which is receiving earnest attention from American ophthalmologists at the present time. The enormous material controlled by Major Smith, who has extracted, by this method more than 17,000 cataracts, and who has adopted it as a routine practice, has afforded him an opportunity to develop a very perfect technique which has so many point of originality that it is proper to regard the Smith operation as an innovation and not simply as an adaptation of the earlier Pagenstecher operation.

It has ever been the dream of ophthalmologists to secure some means of performing a surgically complete extraction—*i. e.*, of the lens within its capsule—without subjecting the eye to risks greater than those incident to the performance of the classical operation. The capsule is unquestionably a prime factor in the development of a secondary membrane which, according to Randolph and others, is probably an attempt on the part of the capsular remnants to regenerate the lens. Nevertheless the older operation has retained its favor with the great majority of operators on account of its supposedly greater safety. Many arguments in favor of the classical operation have been on *a priori* grounds, critics freely admitting that they had had no experience with the newer procedure.

Two papers bearing on this subject were read at the June meeting of the Section on Ophthalmology of the American Medical Association, and appear in full with the extended discussion in the recently issued transactions.

Wuerdemann contends that Smith's method differs only in minor points from Pagenstecher's. (It may be stated that this assertion evoked a spirited rejoinder from Smith who declares that Pagenstecher himself, after seeing the Smith operation performed, admitted that it differed in many essential points from his own technique.) Wuerdemann does not believe the purely corneal section acceptable, for this is followed by slow healing, iridic prolapse, distorted pupil and excessive astigmatism. He makes a 2-5 sclero-corneal section with conjunctival flap, combined with a very small iridectomy. The upper lid is lifted by a Fisher lid holder. Following the iridectomy the bend of a large hook is pressed moderately slowly and continuously on the cornea at the lower edge of the lens, that tilted backward, the pressure gradually relaxing as the upper edge of the

lens enters the wound; the body of the lens is lifted up by the pressure of the hook which follows it in its delivery. A flat spoon may be used to assist the lens to glide out. If the lens becomes impacted between the lips of the wound forceps may be necessary to aid in its extraction. The delivery is completed by the end of the hook catching the lens and rotating it out of the wound. The operation is completed by stroking the iris and conjunctival flap into place. Wuerdemann concludes that the operation is not one to be attempted by any but the most skilled operator, and even with him is not to be chosen as a routine method, for it is a far more dangerous operation, except in the hands of an operator "whose touch is fine, who has no trembling fingers and whose judgment is the most exact."

Greene prefaces his paper with the statement that his first impression of the operation based on twenty cases operated by him was distinctly unfavorable, but further observation has shown that a fair proportion of the patients did well. He calls attention to the fact that no operation offers such a complete and satisfactory disposition of the capsule "which is the beginning, middle and end of most of our after-troubles," as extraction within the capsule. This is so evident that if any added risk is incurred in doing the operation it seems more than offset by what is gained in the comparative freedom from the complications which are liable to follow the regular operation. In Greene's opinion the percentage of success depends more on the attainment of a high degree of skill, technical knowledge and the imitative faculty than on any skill acquired in making the regular operation. Smith's assertion that *the* treatment of immature cataracts is extraction of the lens in its capsule is heartily endorsed by Greene. Hypermature cataracts, generally considered as suitable for extraction in the capsule, have, in this writer's experience, been the most difficult to express. Retinal detachment from loss of vitreous, so much feared by theoretical opponents of the method, appears to be infrequent. Greene himself has seen only two cases in which vision following the operation equalled perception of light which could be attributed to detachment of the retina after the loss of about one-half of the vitreous. "Loss of vitreous should not be the sole measure by which this operation is judged; if it is as serious as many think the danger is yet to be proved." Those favorable to the Smith operation point to the frequent necessity of a discission and consequent danger from operative traumatism and infection in the classical operation and contend that the Smith operation is both safer and more complete even if the loss of vitreous is greater for the average operator which must be conceded. Greene is convinced that the Smith operation offers a smoother and less complicated healing than after any form of capsulotomy operation. What reactions have been encountered have been non-inflammatory in nature and have usually been associated with ruptures of the capsule, incarceration of the iris, cystoid healing, and blood pressure above 160 m.m. Hg. in nervous and restless patients.

The corneal incision advocated by Greene is an enlarged de Wecker without a corneal flap. To counteract the tendency to too large a pupil a small iridectomy is made. During the section and iridectomy the assistant raises the upper lid with the Noyes lid elevator. After the iridectomy the assistant changes to a large hook. To and fro pressure motions are made over the lower third of the lens with the tip of the strabismus hook. Then moderate pressure with the spatula edgewise across the lower sclero-corneal border will advance the lens toward the incision and the zonula will give way. Continued pressure from under or

behind the lens will cause it to describe a half circle, the wound will gape and the lens will emerge bottom end upward, leaving only a small band of zonula to be loosened. This must be done slowly and with the utmost gentleness by drawing it back and forth through the incision.

Emphasis is laid on the necessity of the patient looking straight forward during these manipulations to avoid loss of vitreous. Spasm of the orbicularis is effectually controlled by the strabismus hook and the downward traction on the lower lid by the thumb of the assistant. With a trained assistant it is practically impossible for a patient to squeeze out normal vitreous. If the vitreous should present, one end of the double ended spatula of Smith is passed in as far as the posterior pole of the lens which by pressure through the cornea is made to travel up this inclined plane to its exit. In reference to the pressure three points should be remembered. 1. The pressure should never be excessive but steady and equal. 2. The cornea should be kept moist. 3. There should be no pressure or rubbing over the centre of the cornea. The pressure exerted is not excessive, though it usually seems so to one observing the process for the first time. After the expulsion of the lens the edges of the coloboma are gently stroked into place though the danger of vitreous prolapse during this procedure is much greater than in the classical operation.

The after course is surprisingly free from complications, Greene having observed genuine iritis in only 3 of 75 cases. Striped keratitis and some irregularity in the anterior layers of the vitreous at first impair vision which reaches its best in from one to two months.

Expression within the capsule offers the following advantages:

1. A cataract can be removed at any stage.
2. No discission is ever necessary.
3. There is comparative freedom from post-operative inflammations.
4. There are no capsule entanglements, prompt healing is the rule.
5. The method is especially adapted to institutional work: one operation does all.
6. No ripening methods need be tried.
7. The result is better average vision which does not change with the time, if the fundus conditions remain favorable.

The disadvantages of the method are the following:

1. There is greater liability to loss of vitreous for the average operator.
2. From a cosmetic point of view the wide undrawn pupil (if it results) mars the appearance of the eye while it may not be a disadvantage to vision.
3. A skilled assistant is always necessary in performing the operation.

In the discussion Dr. Peter A. Callan stated that he had never done the operation except in cases of lenses dislocated into the vitreous. The operation appeared to involve a contest between how much pressure the operator had to apply and how much the hyaloid membrane would stand, and thought that such "traumatism" would invite infection. He believed the peasant class which largely made up the clientele of Major Smith, afforded more suitable subjects for this operation than the urban class with which we in America had to deal.

Dr. Arnold Knapp stated that the operation is more difficult and that the loss of vitreous is greater even when performed by skilful operators. Loss of vitreous may mean imperfect healing of the wound, entanglement of the iris, and subsequently a peculiar transformation of the anterior layers of the vitreous into slightly opaque tissue which interferes with vision. Reposition of the iris angles may induce vitreous prolapse which

is apt to come at the end of the operation. Peripheric iritic adhesions and moderate prolapse of the iris were rather the rule than the exception in the cases observed by him. On the other hand extraction in the capsule is an ideal and beautiful operation when the dislocation of the lens takes place readily. There is no post-operative irritation or inflammation of the iris and no further trouble with the capsule which in many cases makes the secondary operation more hazardous and difficult than the first.

Dr. Casey Wood based his estimate of the operation on the careful examination of 47 patients operated by Dr. Greene and the direct observation of the operation as performed by Greene on 9 patients. Wood is convinced that "given an experienced, intelligent, and skillful operator, working in conjunction with a tried and equally experienced assistant, and counting success in cataract extraction entirely from the standpoint of the amount, quality and persistence of central sight six months after the operation, the Major Smith procedure is the best method for extracting all forms of senile cataract."

Dr. Walter R. Parker had attempted extraction in the capsule 23 times, failing 3 times. One patient had post-operative mania and the eye was lost through panophthalmitis. In 50% of the cases the lens turned on itself. There was slight loss of vitreous in 21%. The amount of keratitis is greater than after the classical method.

Dr. W. H. Wilder has not thought it wise to deviate from the classical method. He had assisted Dr. Greene in operations at the Illinois Eye and Ear Infirmary. After several of the operations there were violent reactions and in many of the patients there appeared the lattice like keratitis which usually cleared up. One patient left the hospital with an opacity of the cornea which might have been due to an injury of Descemet's membrane. He criticised some of the statistics presented by Wuerdemann and expressed the hope that future statistics should be reliable in all details.

Dr. Percy Fridenberg related the after history of two patients operated by Major Smith in New York. During the operation, which took a great deal of time, the patients complained of intense pain. On the first dressing, two days later, there was extreme reaction with marked striated keratitis. One case developed a sluggish iridocyclitis, resulting in blindness. The other case showed severe striped keratitis and developed herpes of the cornea.

Dr. L. Webster Fox was non-committal but intended to follow the method.

Dr. Frank Allport believed that the operation was not for the average operator with the average amount of skill and the average number of extractions per annum. Major Smith and Dr. Greene, with their immense operative material, were doubtless justified in the work. The requirement that the patient should constantly look upward to avoid traction by the inferior rectus muscle seemed a great objection to the operation, because it was practically impossible to control the voluntary action of the eye.

Dr. M. Wiener was one of the early enthusiasts for the operation, but abandoned it two years ago. Three of his forty patients returned with membranes across the pupils. Dr. Wiener justly remarks that if a membrane is going to occur when the capsule has been removed he cannot see the great advantages of the operation.

Dr. M. D. Stevenson emphasized the importance of a large corneal incision. He prefers and performs a small sphincterotomy in place of the iridectomy. He regards inversion of the lens (complete rotation) as

very necessary for its safe delivery, inasmuch as the lens thus extruded, effectually blocks the wound and thus prevents loss of vitreous.

Dr. J. W. Millette spoke of the duties of the assistant. During the incision and iridectomy the upper lid is retracted by the Noyes elevator. The lower lid is slightly retracted with the face of the thumb or index finger. In this way the lids are under absolute control and the patient can do no harm by squeezing. After the section and iridectomy the patient must look directly toward the ceiling. The large hook then replaces the elevator and the orbicularis is under perfect control.

SILENT PERCUSSION.

A REVIEW OF RECENT LITERATURE.

By ALBERT E. TAUSSIG, M. D.

1. RESEARCHES IN PERCUSSION.—Goldscheider (*Deutsch. Arch. f. klin. Med.*, Vol. 94, Nos. 5 and 6).
2. SILENT PERCUSSION.—Herz (*Zentralbl. f. inn. Med.*, Vol. 30, No. 1).
3. THEORY OF THE PERCUSSION OF THE THORACIC ORGANS.—Moritz and Roehl (*Deutsch. Arch. f. klin. Med.*, Vol. 95, Nos. 5 and 6).
4. PERCUSSION.—Plesch (*Deutsch. Arch. f. klin. Med.*, Vol. 93, Nos. 1 and 2).
5. A NEW PHYSICAL SIGN.—Pottenger (*Medical Record*, Vol. 76, No. 17).

The time-honored methods of percussion, whereby comparatively loud notes are elicited, are unquestionably of great diagnostic value. The experience of many years has shown that from the cardiac, hepatic, splenic and other outlines, so obtained, definite and trustworthy diagnostic conclusions may be drawn. Recent work with the x -rays has shown, however, that the outlines of solid organs, especially of the heart, so obtained do not by any means correspond to the actual shape and size of the organs examined. The need, therefore, was felt for a method, sufficiently simple and easy for routine clinical use, whereby such viscera might be accurately outlined. Such a method was first suggested by Ewald, perfected by Goldscheider and now known as threshold percussion. In brief, the procedure is as follows: The plessimeter finger is bent stiffly at a right angle and applied to the chest so that its distal joints are held perpendicularly to the plane of the organ to be examined. Percussion is made not from the wrist but, with wrist and elbow kept flaccid, from the shoulder and so gently that with the ear held close to the finger a sound is just perceptible when percussing over a resonant organ. In outlining the heart, for instance, we percuss radially, along the intercostal spaces from lung to heart. As soon as the cardiac area is reached, the note, barely perceptible over the lungs, becomes inaudible. The change is very sharp and definite and the outlines so obtained correspond closely to those found by means of orthodiagraphy. We ourselves have found this method simple and very useful and use it nearly exclusively in routine work.

The objections to the method have been chiefly theoretic. It was maintained that such gentle percussion could set into vibration only superficial structures and that for outlining deep-seated organs, such as the right edge of the heart, a much stronger blow was required. The fallacy of this view was proven by Moritz in a very interesting series of experiments. He filled a tall lamp chimney with a fine gelatine froth, which in its physical characters closely resembles lung tissue, and imbedded in its lower portion a small rubber bulb. The latter was connected with a

lit gas jet. A one grain weight, dropped from an elevation of three-fourths of an inch upon the top of the cylinder of gelatine foam, caused a distinct twitching of the flame and the very lightest touch of the finger caused it to vibrate violently. Similar results were obtained with inflated lung tissue. Other experiments showed that whereas relatively strong percussion caused vibrations in the gelatine froth in all directions, laterally and diagonally as well as vertically, the gentlest possible percussion produced almost exclusively vertical vibrations. We may, therefore, conclude that in the thorax and to a certain extent in the abdomen the lightest possible percussion will cause vibrations that travel straight through to the back and that the gentler the blow, the more the vertical (sagittal) vibrations will predominate, until in orthopercussion we have the note affected only by those structures that lie directly beneath the plessimeter finger, in the direction of the percussion blow.

In working with orthopercussion, one soon becomes conscious, however, that the feeling of a different degree of resistance is almost as striking as the change in the percussion-note and from this observation has grown the method of palpatory percussion. Its theoretic basis is illustrated by Moritz's experiment, described above. Since the gentlest touch causes vibrations to travel through the lung clear to the back, and since, whenever we palpate over lung tissue containing solid structures, such as the heart, these waves are reflected back to the palpating finger, it is clear that for the detection of these differences only a sufficiently delicate sense of touch is requisite. The opinions of clinicians in regard to this method are very diverse. There can be no question that with sufficient practice it is possible accurately to outline deep seated solid viscera and that the results are quite as good as with auditory percussion. It is worth every physician's while to become adept in this method for it is often almost indispensable, as when the patient must be examined in noisy surroundings.

The failure of palpatory percussion to come into general use may be due to the fact that skill in it is somewhat difficult to acquire. Its name, too, is unfortunate. By palpation we usually mean recognition by means of cutaneous sensation. The beginner will, therefore, concentrate his attention upon the sensation perceived through his finger tips. In his book on diagnostic methods, Ebstein calls attention to the fact that in palpatory percussion not only the sense of touch, but that of pressure comes into play. Plesch, in our opinion correctly, goes still farther and maintains that not only the senses of touch and pressure, but also the muscle-sense, the tendon sensation, the periosteal sensation, in a word the entire deep sensation (*batyaesthesia*) of the percussing arm come into play. We know that these deep sensations are far more delicate than the sense of touch. Plesch, therefore, advises that, instead of tapping the chest gently, as Ebstein directs, the finger tips be made to rest gently upon the skin and the requisite vibration be produced by means of a slight vertical tremor. The third and fourth finger are placed gently upon the skin, parallel with the edge of the organ to be outlined. The fingers are moderately bent, the back of the hand in slight extension and the joints up to the shoulder kept so lax that the entire arm, as it were, rests upon the finger tips. Without moving the fingers, the wrist joint is raised and lowered rapidly and gentle thrusts produced in which the entire arm participates. The resulting direct and reflected waves produced in the body under examination will be felt in the entire arm and very delicate differences can be perceived. The finger tips are gradually moved towards the organ to be examined and outlines can be obtained that with

a little practice correspond closely with those found by means of orthodiagraphy.

Quite independently, Pottenger has worked out a similar method which he reported before the American Climatological Association in June of this year, and demonstrated before the Society of Internal Medicine of this city in September. He calls it "light touch palpation." It "consists of a feeling of resistance to the palpating finger when pressed gently upon the skin. To determine the presence of this sign it is well to begin at some little distance from the edge of the organ, or if it be an inflammation or infiltration that is to be outlined, it is well to begin over presumably normal tissue, and then by advancing towards the area whose limits are to be determined, there will be noted a feeling of resistance when this is reached. The heart can be easily and accurately outlined by it, the liver dulness, both relative and absolute, can be determined, and the areas of infiltration in the lung can be mapped out with surprising accuracy." At first he thought the sign to be a skin reflex, produced by a contraction of the *erectores pilorum*, but since he found it equally well marked on the cadaver, this explanation can not be the true one. The fact probably is, as indicated by the experiments of Moritz, that even the gentlest touch produces vibrations that can penetrate through the entire lung. These vibrations will evidently be different when passing through the lung without meeting an obstacle and when reflected back from some more solid structure such as the heart, liver, an area of consolidation or a pleuritic effusion. It seems marvelous that such delicate vibrations can be perceived by the palpating finger, but the fact is beyond dispute. As regards technique, it is essential that the touch be of the lightest and that the examination be made carefully and leisurely.

Under the title of "silent percussion," another method of some theoretic interest, though little practical importance, deserves mention. Proceeding on the assumption that in palpatory percussion the sound produced is a hindrance rather than a help, Max Herz has developed a rather curious method of his own. He argues that the sense of hearing can be eliminated in percussion in two ways, by very gentle percussion and by the simultaneous production of a very loud extraneous noise. He chose the latter means. Barany has constructed a small apparatus in which, by means of the vibration of a little disk a very loud noise is produced. When two rubber tubes are attached to the instrument and the end of one tube is inserted into each ear, a roar is heard that renders the observer practically deaf to all other sounds. If, so equipped, one percusses the chest for instance, only the tactile sensation is perceived. Herz was, by this means, able to outline the thoracic and other solid viscera very accurately. When rather strong percussion is used, figures are obtained that correspond about to those elicited by ordinary methods. On percussing very gently, however, the outlines of the organs examined coincide accurately with those obtained by means of the *x-ray*. The method, while interesting, would seem to possess no advantages over orthopercussion or light touch palpation.

BOOK REVIEWS.

THE PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M. D. Text pages, xxiv.; account pages, 216; leather. Price \$1.00 net, postpaid. Published by The Medical Council, 4105 Walnut St., Philadelphia, Pa.

The basis of this book is a form that is simple and plain for keeping accounts. A charge or a credit can be written in a few seconds of time, and yet it is so strong in law that it is accepted as *prima facie* proof of an account without additional testimony. It may be started any day in the year, may be continued until filled, and is never out of date. The main feature is the convenience of having this small book always in your pocket, so that you may enter a charge at once, on the spot, thus never forgetting any items; and also that you may be able to answer at once any inquiry, such as, "Doctor, how much do I owe you?" thus getting payment right there while the debtor has the money.

In the book also will be found excellent financial advice in regard to fees, billing, collecting, saving and investing, besides a brief form for a will, dying declarations, emergency infant baptism, treatment of poisoning, and much other useful data for instant reference. The popularity of Dr. Taylor's Pocket Account Book is rapidly growing among the busy men of the profession.

The same system is also made into a large book for desk or office use, for those who do not desire to carry their accounts with them.

REFRACTION AND HOW TO REFRACT. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eyeglasses, etc. By James Thorington, A. M., M. D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Fourth Edition. 220 Illustrations, 13 of which are colored. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1909.

Extended notice of this wholly excellent and widely known little work on refraction is unnecessary. This (fourth) edition has been carefully revised and an appendix has been incorporated, which contains additional information on the subject of refraction, as also descriptions and illustrations of new instruments.

SOCIAL SERVICE AND THE ART OF HEALING. By Richard C. Cabot, M. D. New York: Moffat, Yard & Company. 1909. Price \$1.00 net.

Two attitudes are characteristic of two types of physician, especially in his charitable hospital or dispensary work. The one, the so-called "ultra-scientific" type, sees in the patient only the interesting case to be diagnosed with all care and to be treated with all the appropriate therapeutic agents at the disposal of the art of medicine, pure and simple. The other looks deeper. He sees in the patient a human being with individual frailties, perhaps even vices, and with surroundings, social and physical, peculiar to himself. He recognizes that any therapeutic regimen he may direct may suffer shipwreck on the rocks of the patient's weakness, ignorance or poverty. Realizing this he feels that his efforts at cure or relief are often vain, and a sense of ineffectiveness, or even of despair, overcomes him. It is then that he feels his limitations, for the art of medicine is only half of the art of healing. Permanent results are possible only through the coöperation of another group of workers. The physician may recognize the disease and give instructions in regard to its eradication, but the social worker, too, is needed to go to the root of the trouble, to give advice and instruction in regard to domestic hygiene, to offer counsel and assistance in enabling the sick bread-winner to get work of a sort that will not interfere with his recovery, occasionally directly to procure temporary financial help towards paying the rent or obtaining proper food. It is this "team-work" between the physician and the social worker that Dr. Richard C. Cabot advocates in a most interesting and instructive little book. Neither can work to the best advantage alone. The physician may give directions that the patient simply cannot carry out alone; the social worker may see indolence where there really

is illness, stupidity where there really is some remediable impairment of function. At the Massachusetts General Hospital this coöperation between doctor and social worker is being carried out with great success and mutual satisfaction. It is clear that future success in medical work among the poor lies along these lines.

THE PSYCHIC TREATMENT OF NERVOUS DISORDERS. Sixth Revised Edition. By Dr. Paul Dubois, Professor of Neuropathology at the University of Berne. Translated by Smith Ely Jelliffe, M. D., Ph.D., Visiting Neurologist, City Hospital; and William A. White, M. D., Superintendent Government Hospital for the Insane, Washington, D. C.; Professor of Nervous and Mental Diseases, Georgetown University. Octavo, cloth, 485 pp. Price \$3.00 net. Funk & Wagnalls Company, New York.

The widespread interest in this topic and the fact that the first edition of this work so quickly became completely exhausted, warrant the assertion that a new revised edition, including all the latest phases of the question, will be welcomed both by the profession and the public.

THE MEDICAL RECORD VISITING LIST. A Physician's Diary for 1910. New revised edition. New York: William Wood & Co.

This very convenient and eminently practical visiting list has appeared in a new edition. Adapted for 30 patients a week, with or without dates, in handsome morocco binding it costs \$1.25; for 60 patients a week, only \$1.50.

DISEASES OF THE HEART. By James Mackenzie, M. D., M. R. C. P. Oxford Medical Publications. London: Henry Frowde; Hodder & Stoughton. 1908.

Modern methods in the study of heart disease and in the interpretation of cardiac phenomena proceed along lines radically different from those, until recently, in vogue. Formerly great stress was laid upon the accurate recognition of the anatomic valvular lesion, and when we said "aortic stenosis," or "mitral insufficiency," we felt that we had made the diagnosis. More and more the inadequacy of this view is coming to be felt. Valvular and other anatomic lesions of the heart are ultimately of importance chiefly on account of their effect upon the myocardium and the diagnosis of the nature and the extent of the incompetence of the cardiac muscle is the one of greatest practical significance. New methods were found requisite to unlock the secrets of the cardiac muscle, and the most useful of these has been found to be a comparison of simultaneous tracings of the jugular vein and either the radial artery or the apex beat. The vein-tracing gives us an accurate notion of the action of the right auricle, the radial or the apex beat of the left ventricle. A comparison of the two makes possible a profound insight into the pathology of the cardiac rhythm and gives us many a useful bit of practical diagnostic and prognostic information. One of the pioneers in this work was James Mackenzie whose book on the Diseases of the Heart presents in concise form most of our knowledge on these matters. Space forbids any detailed consideration of so technical a subject; we shall merely give a single example of the scope of the graphic method in the study of heart disease. Every clinician has, at some time, had occasion to wonder at the capriciousness of digitalis, which now seems to act almost miraculously, now to be nearly impotent. In this matter Mackenzie himself has made a very interesting observation. He found that where the heart showed a "nodal rhythm," that is, where auricles and ventricles beat simultaneously instead of in succession, there especial benefit was derived from digitalis; in all other conditions, the activity of the drug was much less marked. Similarly his observations throw light upon slight and complete heart-block and a host of other matters that ordinary methods of physical examination leave obscure. The field is one of the most fascinating in internal medicine.

A SYSTEM OF OPERATIVE SURGERY. By various Authors. Edited by E. F. Burgard, M. S. (London), F. R. C. S. In Four Volumes. London: Henry Frowde. Oxford University Press. 1909.

Volume II. In the accuracy of description and the care of detail, few treatises compare with this volume. The selection of the operation depends so entirely on the pathologic condition that it is unavoidable in a large work of this sort to avoid a discussion of the disease; it is fortunate, therefore, that the authors selected are so well qualified for the subjects assigned them. The first part deals with operations for tuberculous affections of the joints, from the experience of Harold J. Stiles. It is an unusual but most timely classification and deals with each bone and joint of the body. Many methods are not those

we are most accustomed to, but throughout we note the constant reference to the practice of surgeons of many parts of the world.

Edmund Owen treats of hare lip and cleft palate operations.

Lenthal Cheattle, who has done so much excellent work on face cancer, has the chapter dealing with the disease in this locality. The surgery of the jaws is contributed by C. H. Fagge and completely covers this field, and operations on the tongue, tonsils and pharynx, by H. T. Bullin, whose name is so intimately associated with the best English work on pathology of tumors. Few chapters in the volume are equal to Bullin's in thoroughness of description and judicious selection of operation for the affection, either malignant or benign.

G. H. Moynihan, whose reputation for stomach surgery is international, covers surgery of this organ and makes a further note of the procedures that have been the most successful and expedient in his hands. G. H. Makins writes the part upon operations upon the intestines. It is thorough and satisfactory. Hernia operations fall to E. Barker, who is well known to those familiar with English surgery or its literature. One would believe by now that hernia and its treatment was a closed book, but it is well described and looked at in new ways by the author. The final chapter, by F. Swinford Edwards, is upon the rectum and anus, and we are glad to note that it deals with this branch of surgery as though it does not require a wonderfully specialized dexterity, but can be encompassed by following good surgical principles.

Volume IV. is in part taken up by discussion of gynecologic operation. The abdominal part of this work is from the pen of J. Bland-Sutton, well known for his surgery. His descriptions of technique are excellent, but we miss the illustrations that in America accompany the best treatises on this subject. However, the general principles of the care of the patient, the risks, the after-treatment, and particularly the judicious selection of the type of operation, make this part of the work invaluable. Vaginal gynecology is well handled by John Phillips; ophthalmic operations are by M. S. Magon; operations upon the ear, by Hunter F. Tod; operations on the larynx and trachea, by W. Douglas Hunter; operations on the nose, by St. Clair Thomson.

The indexing of this volume is so arranged that there is no confusion of the subject. In the second volume the illustrations are notably good. The fourth volume is not quite so well fitted with these aids.

KLINISCHE UND EXPERIMENTALLE STUDIEN ZUR PATHOLOGIE U. THERAPIE D. TUBERKULOSE IM KINDESALTER (Clinical and Experimental Studies on Pathology and Therapy of Tuberculosis in Childhood). Bauer and Engel. Wurzburg: Stuber's Verlag, 1909, p. 165. M.: 6.50.

This monograph presents a series of studies with relation to tuberculosis in childhood. The main interest attaches to the very complete and exhaustive article of Dr. Engel's with reference to tuberculin therapy in childhood. Nineteen children were treated at the Dusseldorf children's clinic and all details are given in full. Old tuberculin (Koch) was used.

Engel finds that a single reaction allows no deduction as to the character of the infection. For this, repeated injections are necessary. In general terms it may be said that the tolerance for tuberculin is in inverse ratio to the degree of infection. The degree of reaction is dependent upon the presence (and the extent) of pulmonary involvement. It is further established that the degree of reaction is dependent *not* upon the age of the child, but upon the extent and progression of the infection. In so far as the typical tuberculosis of childhood is lymphatic or of the bones or joints and not pulmonary, the tuberculin treatment of children and adults differs widely because the cases without pulmonary involvement do best upon tuberculin treatment.

The diagnostic value of the tuberculin injection is fully substantiated. For any one interested in the minutiae of the subject, the monograph will be of great value. A full bibliography is appended, as are also illustrative charts and plates.

INDEX.

A

Subject	Author	Page
Abdominal Cæsarean section, indications for....	Ehrenfest	278
Abscesses, primary, of abdominal wall.....	Myer	275
Albumosuria, Bence Jones.....	.....	395
Alcohol scandal, the.....	Editorial	711
Alimentation, social responsibility of.....	.....	445
Anæsthesia, rectal.....	Carson	313
Anatomy and surgery of palate of infant.....	Blair	191
usefulness and profitableness of.....	.....	297
Animal therapy in skin diseases.....	Winfield	744
Antivivisection.	Editorial	235
Aphasia.	Schwab	504
Apparatus used by the Greeks and Romans in setting fractures and dislocations.....	Milne	48, 128
Appendicitis, aids to the diagnosis of.....	Taussig	213
perforative, complicating pregnancy.....	Babler	680
Archæology, a recent chapter in.....	.....	579
Athletics for health.....	Lydston	120
"Automobile fractures"	Lange	22

B

Bazy, Louis, case of.....	Editorial	166
Beer as a diet, the rehabilitation of.....	.....	459
Bence Jones albumosuria.....	Cale	395
Bismuth emulsions	Skinner	635
Blood, clinical study of.....	Whiting	653
examination of	Strouse	732
pressure.	Myer	501
tubercle bacilli in.....	.....	667
Bones and joints, tuberculosis of.....	Allison	422
Book reviews.....	86, 226, 301, 372, 449, 518, 580, 706, 782,	846
Bowel, large, surgery of.....	Clopton	353
Brachial paralysis	Clopton	151
Brain and its functions.....	.....	221

C

Cæsarean section, abdominal, indications for.....	.....	278
Calcium salts, therapeutic action and indica- tions of	Engelbach	291
Cancer, methods of treating inoperable.....	Lutz	486
problem, the	Editorial	233
uterine, treatment of.....	.....	109

Subject	Author	Page
Cardiac disease, marriage of subjects with.....		515
Cardiospasm.....	Myer	67
Center of awaking, the.....		368
Cerebellar tumor	Cushing	607
Cerebellum, tumor of.....	Bliss and Carson.....	418
Children, rheumatism in.....	Broderick	750
Christian Science, the tragi-comedy of.....	Editorial	456
Civilization, obsessions as obstacles in.....		303
Clemenceau and the riotous medical student.....	Editorial	90
Colds, prevention of.....	Barnes	44
Color photography, value in teaching pathology..	McConnell	202
Conference on pellagra.....		819
Correspondence:		
Letter to the editor.....		220
Paris letter.....	75, 294, 364, 441, 512, 575, 638, 699,	766
Cutaneous reactions to tuberculin in childhood..	Friedlander	432

D

Decompression, relief of intracranial tension by.....		564
Diagnosis and treatment of ectopic gestation.....	Montgomery	327
of genius	Editorial	646
Diagnostic and therapeutic notes.....	155, 362, 507,	774
Dickens' doctors		8
Diet, a question of.....		77
beer, as		459
as a prophylactic and therapeutic.....	Wiley	402
Digestion and assimilation of fats.....	Myer	629
Dislocation of peroneal tendons, treatment of.....		200
Doctors and lawyers.....	Editorial	163
Doctors, what should they read?.....		586
Ductless glands, diseased, cutaneous manifesta-		
tions of	Winfield	744

E

Eclampsia, puerperal, renal decapsulation in....	Ehrenfest	438
Ectopic gestation, diagnosis and treatment of....	Montgomery	327
Education, equalization of physical and mental..	Editorial	643
Embryonic cells, displaced, cause of tumors....	Fisch	359
Entrance requirements and medical schools.....	Editorial	3
Ergot, action upon the uterine muscle.....	Ehrenfest	619
Exophthalmic goitre, treatment by Roentgen method..		218
Eye, Gambetta's		578
syphilis of		676

F

Fats, digestion and assimilation of.....	Myer	629
Fractures.	Allison	61
and dislocations, apparatus used by Greeks		
and Romans	Milne	48
Gambetta's eye		578

G

Subject	Author	Page
Gastric secretion in infancy.....	Friedlander	65
Gastroenterostomy, medical and surgical aspects of	Myer	287
Genius, as to the diagnosis of.....	Editorial	646
Glaucoma, operative treatment of.....	Green	145
Goitre, exophthalmic, treatment by Roentgen method.....		218
Guillotin.	Lutz	341

H

Health for athletics.....	Lydston	120
Hebosteotomy vs. Cæsarean section.....	Zinke	529
Hematology, new methods in.....	Taussig	631
Hemorrhage, intraocular, a problem in diagnosis.....		207
Historical notes:		
Tobias George Smollett.....		79
Dr. Mark Akenside.....		159
Sham operation, the.....		224
Dr. John Brown.....		299
Giuseppe Ribera		703
History, indiscreet chapters in.....		683, 760
Holmes, Oliver Wendell.....	Editorial	588
Hormon question, status of.....	Fisch	148
Hygiene of mouth, etc.....		44
Hysteria, traditional, dismemberment of.....	Babinski	171

I

Indigestion, intestinal fermentative.....	Taussig	70
Indiscreet chapters in history.....	Cabanes	683, 760, 825
Infancy, starch digestion in.....		209
Illusions of memory.....	Editorial	713
Importance of vision.....		641
Infantile convulsions, causation and treatment of.....	Saunders	13
Insanity and literature.....	Editorial	87
Intracranial tension, relief by decompression.....	Clopton	564
Intraocular hemorrhage: a problem in diagnosis.....	Risley	207
Intrathoracic effusions, diagnosis and treatment of.....	Smith	548

K

Kidney case, rare.....	Tuholske	103
cure of movable.....	Kolipinski	795
stone, surgery of.....	Richardson	461

L

Laboratories, milk, development of.....		387
Labor, normal, how long remain in bed after.....	Hinchey	26
a factor in pelvic disease.....	King	808
Language, English, and pathology.....		649
the world's	Editorial	453
Larynx, tuberculosis of.....	Graef	335
Lens, expression of, in its capsule.....	Green, Jr.....	838
Lichen planus	Engman and Mook.....	409
Literary notes.....	9, 95, 169, 241, 312, 385, 460, 526, 591, 650, 718	

Subject	Author	Page
Literature and insanity.....	Editorial	87
Longevity, cultus of.....	Editorial	305
Louis XI. ....	.....	683, 760
Lupus erythematosus	Engman and Mook.....	267
Luther, of what did he die?.....	.....	825

M

Madelung's disease	Allison	772
Marriage of subjects with cardiac disease.....	.....	515
Medical instruction in primary schools.....	Editorial	237
school and its entrance requirements.....	Editorial	3
student and his orthography.....	Editorial	308
Medicine, superman in.....	Editorial	1
Melena, a case of.....	Doran	495
Memory, illusions of.....	Editorial	713
Meningitis, circumscribed serous spinal.....	Bliss	338
Milk laboratories, development of.....	Rotch	387
Mind, creative, and tuberculosis.....	Editorial	161
Movable kidney, cure of.....	.....	795
Murder, a psychologist's view of.....	.....	524

N

Neurasthenia of school teachers.....	Editorial	167
Neuroses, psycho-analysis tests in the treatment of.....	Schwab	695
Nutrition, a wise essay on.....	Editorial	240
Nystagmus with relation to diagnosis of lesions of ear and cerebellum.....	Chamberlin	435

O

Obsessions as obstacles in our civilization.....	Editorial	303
Obstetrics in the Middle Ages.....	.....	444
Ophthalmic-reaction for tuberculosis.....	Green	356
Ophthalmology, serum-therapy in.....	.....	568
Opium question, the.....	Editorial	92
Organo-therapy.	Engelbach	769
Orthography and the medical student.....	.....	308
Orthopedic congress, German, transactions of....	Allison	572
Osteitis deformans, a case of.....	Hewitt	561

P

Palate of infant, anatomy and surgery of.....	Blair	191
Palpation, diagnosticating diseased conditions by.....	Pottenger	803
outlining normal organs by.....	Pottenger	803
Paralyses, surgical treatment of.....	Allison	688
Paralysis, brachial	Clopton	151
Parents, cause of unlikeness to.....	.....	715
Pathology and the English language.....	Editorial	649
value of color photography in teaching.....	.....	202
Pellagra, conference on.....	.....	819
in the United States.....	Myer	839
notes on	Warfield	819
Pelvic surgery, conservatism in.....	Beedle	123
disease, labor as a factor in.....	King	808

Subject	Author	Page
Percussion, silent	Taussig	843
Peritonitis, tuberculous, in childhood.....	Friedlander	623
Peroneal tendons, treatment of dislocations of...	Tracy	200
Physiology of shock.....	Seelig	670
Pithiatism, the dismemberment of traditional hysteria.	Babinski	171
Pleura, palpation of.....	Pottenger	803
Pneumonia, vaccine therapy of.....	Engelbach	141
Poe centenary		779
Practice and preaching.....	Editorial	381
Pregnancy complicated by appendicitis.....		680
toxæmia of	Stowe	593
Prisons, tuberculosis in.....		157
Problem of problems, the.....	Editorial	521
Prostatitis, acute	Jacobson	614
Psychiatry, lectures on.....	Schwab	662, 813
Psychologist's view of murder, a.....	Editorial	524
Psychology of the child.....		94
Public, surgeon's plea in behalf of.....	Editorial	6
Puerperal eclampsia, renal decapsulation in.....	Ehrenfest	438
Puerperium, physical culture of.....	Gellhorn	33

R

Rectal anæsthesia	Carson	313
Red Cross societies, the.....	Editorial	383
Refraction, art of.....	Green, Jr.....	600
Renal decapsulation in puerperal eclampsia.....	Ehrenfest	438
Rheumatism in children.....	Broderick	750
treatment of	Engelbach	626
Ribera, Giuseppe		703

S

School children, defects in.....		721
teachers, neurasthenia of.....	Editorial	167
Schools, medical instruction in.....		237
Sclerosis, multiple, syphilitic form of.....	Spiller and Woods.....	97
Self-control, advantages of.....	Editorial	377
Serum-therapy in ophthalmology.....	Green	568
Sex, a new rubric in the determination of.....	Editorial	451
Sham operation, the.....		225
Shock, physiology of.....	Seelig	670
"Sick Mind," the.....	Editorial	519
Silent percussion	Taussig	843
Society proceedings		81, 447
Spiritual healing		311
Sputum and blood in tuberculosis.....	Fest	738
Starch digestion in infancy.....	Friedlander	209
Superman in medicine.....	Editorial	1
Surgeon's plea in behalf of public.....	Editorial	6
Surgery of kidney stone.....	Richardson	461
of large bowel.....		353
pelvic, conservatism in.....	Beedle	123

Subject	Author	Page
Surgical treatment of paralyses.....	Allison	688
Syphilis, congenital, in infants.....	Abt	259
of the external eye.....	Wood	676
Syphilitic form of multiple sclerosis.....	Spiller and Woods.....	97

T

Theory of the "Complex," the.....	White	243
Therapeutics in the seventeenth century.....	Editorial	583
Tonsil question	Chamberlin	691
Trachoma, interesting chapter in history of.....		444
Treatment of dislocation of peroneal tendons.....		200
of early cases of tuberculosis.....		478
of ectopic gestation.....		327
of exophthalmic goitre by Roentgen method.....		218
of infantile convulsions.....	Saunders	13
of inoperable cancer.....		486
of intrathoracic effusions.....	Smith	548
of neuroses		695
of rheumatism		626
of surgical, of paralyses.....	Allison	688
of uterine cancer.....		109
Tubercle bacilli in circulating blood in tuber- culosis.	Taussig	667
Tuberculin, cutaneous reactions to, in childhood.....		432
Tuberculosis, aids to the diagnosis of.....	Taussig	497
and the creative mind.....	Editorial	161
of the bones and joints.....	Allison	422
diagnosis and treatment of early cases of.....	Flick	478
examining sputum and blood in.....		738
late work on.....	Fisch	427
of the larynx.....	Graef	335
ports of entry of.....	Friedlander	765
in prisons		157
problem in the United States, hopeful out- look of	Knopf	537
ophthalmic-reaction for	Green, Jr.....	356
tubercle bacilli in blood in.....		667
Tuberculous peritonitis in childhood.....	Friedlander	623
Tumors, displaced embryonic cells the cause of.....	Fisch	359
Tumor of the cerebellum.....	Bliss and Carson.....	418
cerebellar.	Cushing	607

U

Unlikeness to parents, cause of.....	Editorial	715
Uterine cancer, treatment of.....	Taussig	109
muscle, action of ergot upon.....		619

V

Vaccine therapy of pneumonia.....	Engelbach	141
Vagrancy evil, the.....	Editorial	379
Vision, importance of.....		641
Visual and aural defects of school children.....		721